

02-8906-34-PA

REV. NO. 0

FINAL DRAFT  
PRELIMINARY ASSESSMENT  
METZ METALLURGICAL  
SOUTH PLAINFIELD, NEW JERSEY

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-8906-34  
CONTRACT NO. 68-01-7346

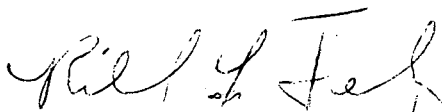
FOR THE

ENVIRONMENTAL SERVICES DIVISION  
U.S. ENVIRONMENTAL PROTECTION AGENCY

SEPTEMBER 22, 1989

NUS CORPORATION  
SUPERFUND DIVISION

SUBMITTED BY:

  
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205697



# POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

## PART I: SITE INFORMATION

1. Site Name/Alias Metz Metallurgical, alias, Degussa, alias Degrassa Corp.  
 Street 3900 South Clinton Avenue  
 City South Plainfield State New Jersey Zip 07080
2. County Middlesex County Code 023 Cong. Dist. 12
3. EPA ID No. NJD002195303
4. Latitude 40° 34' 00" N Longitude 74° 25' 49" W  
 USGS Quad. Plainfield, New Jersey
5. Owner Metz Metallurgical Corp. Tel. No. (201) 561-1100  
 Street 3900 South Clinton Avenue  
 City South Plainfield State New Jersey Zip 07080
6. Operator Metz Metallurgical Corp. Tel. No. (201) 561-1100  
 Street 3900 South Clinton Avenue  
 City South Plainfield State New Jersey Zip 07080
7. Type of Ownership  
☒ Private      ☐ Federal      ☐ State  
☐ County      ☐ Municipal      ☐ Unknown      ☐ Other \_\_\_\_\_
8. Owner/Operator Notification on File  
☒ RCRA 3001      Date 8/18/80      ☐ CERCLA 103c      Date \_\_\_\_\_  
☐ None      ☐ Unknown
9. Permit Information
 

Permit	Permit No.	Date Issued	Expiration Date	Comments
<u>Air</u>	<u>15305</u>	<u>May 2, 1984</u>	<u>Permanent</u>	<u>Baghouse No. 2</u>
<u>NJPDES</u>	<u>NJ0034835</u>	<u>Unknown</u>	<u>Unknown</u>	
10. Site Status  
☒ Active      ☐ Inactive      ☐ Unknown
11. Years of Operation 1965 to Present

12. Identify the types of waste units (e.g., landfill, surface impoundment, piles, stained soil, above- or below-ground tanks or containers, land treatment, etc.) on site. Initiate as many waste unit numbers as needed to identify all waste sources on site.

(a) Waste Management Areas

Waste Unit No.	Waste Unit Type	Facility Name for Unit
1	Drums	Drum(s) Storage Area(s)
2	Tanks	Tanks
3	Incinerators	Incinerators

(b) Other Areas of Concern

Identify any miscellaneous spills, dumping, etc. on site; describe the materials and identify their locations on site.

Metz has been the scene of several spills and fires in the past. On August 25, 1982, Metz had a spill of potash (potassium hydroxide) estimated to be from 500 to 1100 gallons in quantity. An investigation of the spill by the NJDEP revealed that a 6,000 gallon vertical tank ruptured during routine filling operations. The potash reportedly reacted with the fiberglass tank, weakening it, and, thus causing the rupture. It was originally believed that the material was being discharged to a nearby creek via a storm drain. However, in actuality, the material flowed into a nearby ditch from which it entered a drain pipe and discharged into an on-site pond. Metz later admitted that some of this material reached the receiving stream and that dikes had been built to prevent the flow from entering the storm drain and other dikes were constructed in the receiving stream "to contain the potassium hydroxide that had already reached the stream." The material was recovered and pumped into a 25,000 gallon storage tank to await neutralization with nitric acid in Metz's waste water pretreatment facilities. These facilities discharge into the sewer tributary to the local Publicly Owned Treatment Works (POTW). A follow-up inspection by the NJDEP on September 7, 1982 revealed that a large quantity of materials remained in the ditch and was being pumped to ditches at the rear of the property. When the NJDEP inspector pointed this out to Metz management personnel, the pumping was redirected to the waste water pretreatment facilities. Material that had been pumped to the pond by the inappropriate pumping methods was now also redirected to the waste water pretreatment facilities. Water quality had been slightly affected by this incident. On February 16, 1983, Metz was fined \$875 for this incident. A containment system was subsequently built around the tank.

On June 7, 1985, Emergency Technical Service Corp. detonated a partially filled four liter container of a ethyl ether or anhydrous ether on Metz's property. This was done because the waste hauler could not or would not take it because of its volatile nature.

On August 10, 1985, NJDEP personnel responded to a fire at the Metz facilities. A scrubber packed spray tower, an air pollution control device, was on fire. Formaldehyde and hydrogen chloride were alleged to be discharged by the fire. The notification indicates that there was a possibility of exposure to the public. The NJDEP investigation report indicates that several firemen were hospitalized for smoke inhalation and two were injured in falling from a ladder. After the fire was put out, a large tank containing hydrochloric acid was found to be "severely fuming." A vapor cloud was observed and reported to have dissipated 50 feet from the tank. However, firemen were advised to keep clear of the tank. No fumes were observed leaving the plant grounds of Metz.

On February 14, 1986, Metz had a spill of 0.75 pounds of silver chloride. This silver chloride was apparently discharged through its New Jersey Permit Discharge Elimination System (NJPDES) permitted outfall along with storm water runoff, roof drains, and non-contact cooling water. Metz analysis of the discharge at the outfall revealed a silver chloride concentration of 55.9 mg/l and 3.9 mg/l of silver ions. Metz calculated the flow from its roof top, where the silver chloride spill occurred, to be 750 gallons. Some of the calculations and assumptions may be open to question. There appears to be no record of notification to the NJDEP or any kind of enforcement follow-up.

On March 30, 1988, a spill of 100 gallons of corrosive liquids was reported by Metz. The on-scene report from the NJDEP indicated that an unknown number of drums were leaking, but that the spill was contained. The Incident Notification Report indicated there may be contamination of land.

On April 8, 1988, Metz had another fire. The initial report made to the NJDEP indicated that the plant was "fully involved" and that "smoke is impacting Rt. 287." Route 287 is about 3,000 feet to the south of the facility. It was reported that the chemicals involved in the fire were methanol, 30 weight oil, and precious metals. It was also reported that three minor injuries occurred due to the flashover from fire. There is no report of any environmental problems from this fire.

Finally, on March 30, 1989, a spill of less than 2 gallons of therminol, a heat transfer oil, was reported. The spill got into Bound Brook and a boom was placed downstream to prevent the oils from escaping. The spill was reported to have been cleaned up and no adverse environmental impacts were reported. The spill was caused by an overflow from an expansion tank.

The exact location of any of these spills or fires is unknown. The background information for these spills received by NUS Corp. did not provide sufficient detail to ascertain the location of the various occurrences.

13. Information available from

Contact Amy Brochu Agency U.S. EPA Tel. No. (201) 906-6802  
Preparer James Frost Agency NUS Corp. Region 2 FIT Date September 15, 1989.



**PART II: WASTE SOURCE INFORMATION**

For each of the waste units identified in Part I, complete the following six items.

Waste Unit 1 - Drums, Drum(s) Storage Area(s)

**1. Identify the RCRA status and permit history, if applicable, and the age of the waste unit.**

On August 15, 1980, Metz filed a Notice of Hazardous Waste Activity with the U.S. EPA as a treatment, storage, and or disposal (TSD) facility. In this notice, Metz claimed it received hazardous waste from non-specific sources in category F001 (toxic, spent halogenated solvents) and it had the following commercial chemical product hazardous wastes: P104 - silver cyanide, U122 - formaldehyde, U133 - hydrazine, U154 - methanol, and U239 - xylene.

From other correspondence available in the file, it is known that Metz filed a Part A permit application on November 19, 1980. The contents of the application are unknown and can only be surmised from later correspondence. A copy of the application was not in the available background information. However, a computer printout summarizing the application indicates that Metz stated they have a design capacity of 10 gallons in containers (S01).

On February 5, 1982, an NJDEP inspection revealed that Metz had four drums of waste that were either ignitable or reactive, which apparently, was all that was seen during the inspection. No environmental problems were reported.

On July 2, 1982, Metz filed a request with U.S. EPA to delist the facility from a TSD to generator. The letter indicates that the chemicals identified in the permit application are either consumed in processing or are transported from the site under the manifest system.

On January 7, 1983, the NJDEP issued a Notice of Violation (NOV) to Metz. The NOV was issued because Metz had not submitted a TSD Annual Report. On January 11, 1983, Metz filed a reply indicating that they had requested delisting to generator from the U.S. EPA and that a telephone call to the U.S. EPA had confirmed that it was considered to be a generator only.

On February 16, 1983, the NJDEP conducted an inspection of Metz. No environmental violations were reported. However, it was noted that Metz needed to submit copies of waste analyses, personnel training records, and a contingency plan to NJDEP.

On December 5, 1983, Metz wrote to the NJDEP formally request delisting. Metz indicated that they had mistakenly identified one storage and three treatment processes. Activity S01 was claimed to be a storage unit of drums for waste Freon TF. This waste was claimed to be removed within 90 days. As a follow-up, on December 12, 1983, Metz wrote the NJDEP to further explain what it felt was waste and how this applied to the facility. An expedited reply was requested so that processing of Metz's pending air pollution permit application could continue. On February 2, 1984, the NJDEP notified Metz that the S01 activity was delisted.

On April 26 and 27, 1984, the NJDEP conducted an inspection of Metz's facility. Several drums with various wastes were observed. During the inspection twenty-two drums of waste oil were observed being stored outside; one drum of waste Freon TF was observed in the compressor room; and three drums containing waste oil type X387 in the room next to the degreasers. These last three drums contained leaking capacitors. The 90 day storage period was

approaching its end for some of this waste. Also, during this inspection, another 25 drums of waste oil were observed. This oil used to be burned in the incinerator, however was no longer burned there due the waste oil regulations. This oil was reported to have been accumulated since January 1983, when the waste oil regulations went into effect. Metz was planning to dispose of this oil and remove any silver chips in it by means of a high pressure filter prior to disposal. It appeared this waste had accumulated longer than 90 days, but this violation was not identified in the field NOV. Also, 56 drums of hexane and oil bearing precious metal were observed. The contents of these drums were to be burned when the new incinerator went on-line.

A field Notice of Violation during this inspection was issued for the following:

1. No training program for facility personnel
2. No information given to police or fire departments on hazardous waste handled
3. No coordination with local hospitals
4. No coordination for department inspections
5. No contingency plan
6. Metz has wastes which are not properly listed, and
7. Metz was not properly storing drums of waste oil (some had no bungs and there was some spillage).

On May 11, 1984, Metz responded to the NOV, indicating that each of the violations was resolved or in the process of being resolved. On May 24, 1984, a follow-up NJDEP inspection, to verify compliance with the field NOV was made. It was found that Metz was in the process of preparing the plans and making the necessary coordination with local hospital and fire and police departments. Also, 1 drum of "dirty Freon", 6 drums of waste oil, and 3 drums of polychlorinated biphenyl (PCB) waste were observed on-site. It was noted that the PCB waste had been stored longer than 90 days. As a result of the April 26 and 27, 1984 inspection, an enforcement referral was made on June 6, 1984. The referral notes, that Metz was cited for the same violations that it was cited for in a 1983 inspection. In addition, the maximum penalty was recommended.

On November 28, 1984, an Administrative Order was drafted and a \$700 penalty was recommended. On December 12, 1984, the Order was sent to Metz for the violations noted above and a penalty of \$700 was assessed. On December 20, 1984, Metz responded and sent payment for the penalty. In their response, Metz indicated their intention to comply with the requirements, and their progress, to date, of coming into compliance.

On January 4, 1985, the NJDEP responded to the Metz letter granting them additional time to complete the employee training program and further requesting a letter from the local fire department indicating the fire department's unwillingness to inspect Metz semi-annually. On January 9, 1985, Metz informed the NJDEP that the fire department will now perform the inspections; and on February 28, 1985, Metz informed the NJDEP that personnel training had been completed.

On June 26, 1985, Metz filed a new Notification of Hazardous Waste Activity. Again, they identified themselves as a TSD with the notation "for recycling purposes only."

On October 31, 1986, Metz requested the NJDEP to grant an exception from its requirements to incinerate waste oil so that Metz could burn the 25 gallons of waste oil it accumulates each week. On December 16, 1986, the NJDEP denied Metz's request because the incinerator unit had to have a rated gross heat input of at least 20 million BTU/hr. Metz's incinerator was rated at 4.5 million BTU/hr and, therefore, did not meet the NJDEP requirements for an exemption.

On July 2, 1987, NJDEP performed another inspection. Four drums of waste oil and two drums of acetone were the only wastes observed during the inspection. A field Notice of Violation was issued for two violations. The first was the lack of a contingency plan and the second was the lack of semi-annual drills. Metz had problems complying with these requirements because of its extreme security precautions. No enforcement action was recommended and no environmental problems were noted. On July 8, 1987, Metz responded by indicating that the evacuation (contingency) plan was almost completed and that the first semi-annual drill was scheduled for October 23, 1987.

**2. Describe the location of the waste unit and identify clearly on the site map.**

NJDEP inspections have indicated that drums have been observed inside buildings A and B, though these specific locations are not clearly identified. Drums have also been observed outside and are shown in Figure 2, attached to this report. Metz has also identified various drum storage areas in a drawing of building A that it submitted to the NJDEP. These are also shown in Figure 2.

**3. Identify the size or quantity of the waste unit (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums or tanks). Specify the quantity of hazardous substances in the waste unit.**

Various quantities of drums have been observed by NJDEP personnel during their inspections. As many as eighty-six 55-gallon drums have been observed by the NJDEP at one time. NUS Corp. personnel observed about 40 drums during an off-site reconnaissance, however the contents of the drums is unknown.

**4. Identify the physical state(s) of the waste type(s) as disposed of in the waste unit. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid, or gas.**

The contents of all of the drums are believed to be liquid.

**5. Identify specific hazardous substance(s) known or suspected to be present in the waste unit.**

Metz apparently identified the following hazardous wastes in its Part A Permit Application as silver cyanide, formaldehyde, methanol, hydrazine hydrate and freon TF. It later indicated that only the freon TF was a waste.

The NJDEP has observed the following wastes on-site: waste hexane, PCBs, silver waste, acetone, waste oil, still bottom Freon TF, D001-solvent waste, U154-waste methanol, U239-waste xylene, U133-waste hydrazine, U122-formaldehyde, P104-silver cyanide, U123-formic acid, and F001-fluorocarbons.

Manifests have indicated aromatic hydrocarbons and ISO PARE are hazardous substances found at the site.

6. Describe the containment of the waste unit as it relates to contaminant migration via groundwater, surface water, and air.

Some of the drums are kept inside and the containment for all media is rated as adequate. However, the drums that were observed outside were observed to be sitting either on pavement or on pallets over gravel. Runoff from the areas where the outdoor drums are stored may enter the ground in the gravelled area; or could enter surface water via storm sewers or other drainage paths onsite. No containment of an air release for the outdoor drums is provided. Small amounts of oil spillage from drums were noted in the April 26 - 27, 1984 NJDEP inspection. These spills were cleaned up by the second day of the inspection. Also, drums with missing bungs and leaking drums have been reported. However, in its February 5, 1982 inspection, the NJDEP indicated that containment was adequate.

Ref. Nos. 1, 2, 3, 6 to 9, 11 to 13, 15 to 18, 20 to 23, 25, 29, 34 to 40, 46

## PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following six items.

Waste Unit 2 - Tanks, Tanks

1. Identify the RCRA status and permit history, if applicable, and the age of the waste unit.

In many respects, the RCRA history of this unit is similar to the history of the drums explained in the discussion of waste unit 1. The discussion of this unit's history will be limited to those portions directly attributable to it and any differences from the permit history discussion found in unit 1 (drums).

The Notice of Hazardous Waste Activity was filed on August 18, 1980. A copy of the Part A Permit Application could not be found, however it is known to have been filed on November 19, 1980. Apparently, Metz indicated they had 2,400 gallons per day, treatment capacity in the tanks (T01) and 40,000 gallons in T04 activities.

On February 5, 1982, the NJDEP inspected the Metz facilities. The notes from the inspection do not address any tanks. On July 2, 1982, Metz requested to be delisted from a TSD to generator. They made this request to the U.S. EPA.

As detailed previously, on August 25, 1982, Metz had a spill of caustic potash (potassium hydroxide). The spill occurred when the potassium hydroxide storage tank ruptured.

On February 16, 1983, the NJDEP conducted another inspection of the facility. Tanks were not addressed in the notes of the inspection.

On December 5, 1983, Metz wrote to the NJDEP formally requesting delisting. In that request, Metz indicated that the activity designated as T01 was no longer used, and that the activity designated as T04 was regulated under the Clean Water Act, not RCRA, since it was a waste water pretreatment facility. On April 13, 1984, the NJDEP delisted the activities designated as T01 and T04.

On April 26 and 27, 1984, the NJDEP inspected Metz. The inspection confirmed that the activity designated as T01 was no longer used and that the piping to this cyanide destruction unit had been disconnected. However, the inspection noted that there was still some sludge in the bottom of the tank. Metz stated that this sludge would be processed because it contained silver and copper, and that wastes were not expected to be generated from this process. No further discussion of tanks was presented and follow-up field NOV's and an enforcement referral did not address any violations concerning tanks.

On May 24, 1984, a follow-up inspection was made by NJDEP. No discussion of tanks was presented in the notes.

On December 12, 1984, NJDEP issued an Administrative Order against Metz and fined them \$700. The order did not address any violations related to tanks.

On June 26, 1985, Metz filed a new Notice of Hazardous Waste Activity. A complete copy of this filing is unavailable.

On June 4, 1986, Metz submitted an analysis of the filter cake from the wastewater treatment tank (T04). On July 1, 1986, NJDEP declared that this unit is an Industrial Waste Management Facility (IWMF) and an elementary neutralization unit. As a result of this determination, it was determined that this unit was regulated under the New Jersey Water Pollution Control Act, but that a NJPDES/SIU permit is not needed.

On July 2, 1987, a NJDEP inspection was conducted. Tanks are not addressed in the inspection notes and, although a field Notice of Violation was issued, no violations concerning tanks were noted.

On March 30, 1989, Metz had a spill caused by an overflow from an expansion tank. Please see the discussion under Part I, Section 12b of this report for further details on this spill.

On July 25, 1989, NUS Corp. conducted an off-site reconnaissance of the facility and several process tanks were observed. The tanks that were observed could not be easily discerned as to whether they were storage or process tanks.

**2. Describe the location of the waste unit and identify clearly on the site map.**

There is no firm data to indicate the exact current location of the tanks. The tanks observed in the NUS Corp. off-site inspection are identified on a plan drawing submitted by Metz, as containing water, sodium hydroxide, potassium hydroxide, and formaldehyde. However, during the off-site inspection, it was observed that the tanks identified on the drawing as being along the north wall of the building, were no longer there. This building is currently under construction possibly as part of the remodeling/reconstruction after the fire in April 1988.

**3. Identify the size or quantity of the waste unit (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums or tanks). Specify the quantity of hazardous substances in the waste unit.**

According to the plan drawing submitted by Metz of building A, the following tanks are located on the plant grounds. It should be noted that these tanks may not be in place any longer due to remodeling; and that most of these tanks are process tanks and not used for storage of wastes. It appears that there were 2 waste oil tanks and 1 waste freon TF tank.

<u>Contents</u>	<u>Number of Tanks</u>	<u>Capacity</u>
Liquid Oxygen	1	Unknown
Liquid Nitrogen	1	Unknown
Catalyst By-products	2	Unknown
Anhydros ammonia	1	Unknown
Nitric Acid	2	3,000 gal. each
Catalyst By-products	1	Unknown
Dry ceramic storage	1	Unknown
Aqua regia by products	5	500 gal. each
Hydrochloric acid	1	8,000 gal.
Copper effluent hydrocarbon by-product	1	Unknown
Methanol-water mixture by-product	1	Unknown
Dry ceramic storage	2	Unknown
Water	1	19,000 gal.
Sodium Hydroxide	1	10,000 gal.
Potassium Hydroxide	1	6,000 gal.
Formaldehyde	1	6,000 gal.
Waste Oil	2	Unknown
Freon TF	1	Unknown
Waste Freon TF	1	Unknown
5% Sulfuric Acid	2	Unknown

4. Identify the physical state(s) of the waste type(s) as disposed of in the waste unit. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid, or gas.

The physical state of the waste is liquid.

5. Identify specific hazardous substance(s) known or suspected to be present in the waste unit.

Please see the discussion under Item 3 above which identifies materials stored in tanks.

6. Describe the containment of the waste unit as it relates to contaminant migration via groundwater, surface water, and air.

In as much as most of the tanks are indoors, the containment for these tanks is assumed to be adequate. However, in the past, the outdoor tanks, have had uncontrolled releases to surface waters and the air. Whether surface runoff is treated in the pretreatment facilities or a pond referred to by Metz, which could provide containment, is unknown. There have been no reported violations pertaining to inadequate containment. However, there have been spills of potassium hydroxide and silver chloride. These spills did reach the receiving stream.

Ref. Nos. 1 to 6, 9 to 13, 15 to 22, 24 to 29, 35 to 40, 46

**PART II: WASTE SOURCE INFORMATION**

For each of the waste units identified in Part I, complete the following six items.

Waste Unit 3 - Incinerator, Incinerator

**1. Identify the RCRA status and permit history, if applicable, and the age of the waste unit.**

The RCRA history of this unit is very similar to that of the one for tanks. However, Metz included an incinerator (T03) in its original permit application. The NJDEP has not made very many observations of this unit. Metz requested delisting from U.S. EPA on July 2, 1982. The unit was delisted on February 7, 1984 and a fire in a scrubber for one of these units occurred on August 10, 1985, causing considerable damage to the facility. It appears that Metz owns and operates three incinerators.

A Notice of Hazardous Waste Activity was filed on August 18, 1980. A copy of the Part A Permit Application is not available, however it is known that it was filed on November 19, 1980.

On December 5, 1983, Metz made a subsequent delisting request to the NJDEP. In this letter, Metz states that thermal reduction takes place in a multiple chamber, controlled air, stationary, thermal reductor. They further indicate that this unit is used for precious metal recovery of in-plant materials, such as, filter cake, methanol, water, silver mixtures and plant trash. Metz went on to say that since this was a precious metal recovery process, it did not have an incineration process. On December 12, 1983, Metz clarified that all materials are recycled or regenerated. On February 7, 1984, NJDEP delisted this activity designated as T03.

On April 26 and 27, 1984, the NJDEP inspected Metz. The inspection notes indicate that Metz has two existing incinerators and a third one ready to go on-line. Various precious metal bearing materials were processed in the incinerator and the metals were then, recovered from the ashes. The report went onto indicate that some materials are "... burned for their heat content..." While a NOV was issued during this inspection, the findings did not relate to the incinerators.

On May 2, 1984, NJDEP issued an air permit for a Wheelabrator-Frye Baghouse No. 2. It is presumed that this is the permit that Metz was awaiting in order to operate its third incinerator.

On June 26, 1985, Metz refiled its Notice of Hazardous Waste Activity with the NJDEP. Again they identified themselves as a TSD facility with the annotation of "for recycling purposes only." Because the copy of the notification was incomplete, it is unknown what wastes Metz claimed to have.

As discussed previously, on August 10, 1985, Metz had a fire. The fire apparently started in a packed spray tower. See the discussion under spills, Part I, Item 12, for a more detailed discussion of this occurrence.

On October 31, 1986, Metz requested an exemption to burn used gearbox lubricating oil and spent degreasing solvent in its incinerators. On December 16, 1986, the NJDEP denied this request. The reason for the denial was that Metz's incinerators were rated at 4.5 million BTU and the exemption to burn these wastes required a 20 million BTU operation. Therefore, to prevent further dilution of the requirements, the NJDEP denied the request.

On July 2, 1987, the NJDEP performed another inspection of Metz. Thermal treatment units were only addressed as not applicable. Two violations were noted, however neither of these dealt with incinerators.



On April 8, 1988, the Metz plant was fully involved in a fire, including the incinerators. There were injuries but no apparent environmental problems. For further discussion of this fire, please see Part I, Item 12.

**2. Describe the location of the waste unit and identify clearly on the site map.**

The incinerators are believed to be in the rear of building A as shown by a drawing made by the NJDEP personnel during the April 26 and 27, 1984 inspection. This is the only known drawing showing the location of this unit.

**3. Identify the size or quantity of the waste unit (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums or tanks). Specify the quantity of hazardous substances in the waste unit.**

The company has three incinerators. The Part A Permit Application indicated that the incinerator(s) had a capacity of 20 gallons per hour. There is no other data available to indicate the capacity of this unit.

**4. Identify the physical state(s) of the waste type(s) as disposed of in the waste unit. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid, or gas.**

The physical state of the wastes is liquid and solid.

**5. Identify specific hazardous substance(s) known or suspected to be present in the waste unit.**

Wastes known or suspected to be burned in the units are: waste oil, used hexane, waste wash solution (methanol), filter cake, Iso-PARE, contaminated protective clothing, baghouse dust, and slag. Ash is produced and is recycled.

On February 16, 1983, the NJDEP conducted an inspection and indicated that materials are brought in and melted down. The notes also mention that waste oil is used as a fuel and that the incinerator... "is used to burn in-house garbage."

**6. Describe the containment of the waste unit as it relates to contaminant migration via groundwater, surface water, and air.**

With the unit being located indoors, containment is provided for both surface water and groundwater. Reference is made to a scrubber, packed spray towers, and baghouses for air pollution containment. A pretreatment wastewater facility also provides treatment, prior to discharge of any aqueous wastes to the local POTW.

An air scrubber caught on fire on August 10, 1985. There was a possibility of public exposure and a large vat of hydrochloric acid was observed to be fuming severely. Also, on April 8, 1988, Metz had another fire which allegedly concerned the entire plant. Smoke from this fire was interfering with traffic more than one half mile from the site. Therefore, since no containment is provided during such incidents, exposure to the public is possible.

Ref. Nos. 1, 2, 3, 6, 8, 9, 11 to 13, 17 to 19, 29 to 32, 34, 36 to 39, 43, 46

**PART III: HAZARD ASSESSMENT****GROUNDWATER ROUTE**

1. Describe the likelihood of a release of contaminant(s) to the groundwater as follows: observed, alleged, potential, or none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminant(s) to the facility.

The likelihood of a release for waste units contained inside the buildings may be rated as none. However, there is a potential for release from waste units, such as the outside drum storage area and the outdoor tanks. Spills and leaks have occurred many times at the Metz facility. Please see Part 1, Section 12b for greater detail on these incidents. As a result of one of these incidents materials have been observed on the ground for as long as two weeks. Smaller spills and leaks have been observed on the ground for lesser periods of time; thus, the potential for a release to groundwater exists. On January 13, 1986, a sample of the well on the Metz property was collected. Results from volatile organic analysis did not pass quality assurance and control requirements. Results from inorganic analysis indicated that compounds were not comparatively elevated. Since silver could be attributable to the site, it is worth noting that the results from its analysis did not pass quality assurance and control requirements. It is not known whether this sample was collected upgradient or downgradient to the spills on site.

Ref. Nos. 2, 4, 9, 17, 21, 31, 32, 38, 42, 43, 45, 46, 60

2. Describe the aquifer of concern; include information such as depth, thickness, geologic composition, permeability, overlying strata, confining layers, interconnections, discontinuities, depth to water table, groundwater flow direction.

The site is underlain by the Passaic Formation, formerly known as the Brunswick Formation. This formation is composed of non-marine red-brown shales with interbedded siltstones and occasional layers of sandstone, which generally strike to the northeast and dip 9° to 12° to the northwest. This bedrock formation is overlain by glacial deposits of Pleistocene age. The sediments are composed of varying amounts of clays, silts, sands, and cobbles. The thickness of these sediments and, thus, the depth to bedrock ranges from zero to about 105 feet.

In most locations surrounding this site, the overlying sediments and the bedrock of the Passaic Formation are in hydraulic connection. Recharge to the bedrock is generally through infiltration of precipitation directly through the surficial sediments. The regional flow of groundwater may be influenced locally by pumping. The soil at the site is characterized as Ellington Variant and Klinesville. Both soils are rated as having a moderately rapid permeability rate. The water capacity of these soils is rated low to moderate and the depth to bedrock may be 1.5 to 3 feet in the area of the site. No sources have indicated that the depth to the water table is over 10 feet deep. The static water level from a well on site is 10 feet.

Ref. Nos. 41, 55, 56, 57, 58, 59, 61, 62

3. Is a designated sole source aquifer within 3 miles of the site?

There are no sole source aquifers within 3 miles of the site.

Ref. No. 69

4. What is the depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer of concern?

The depth to the seasonal high water table, as measured from the lowest point of the waste disposal or storage, may be approximately 1.5 feet. This measurement is taken from the ground surface since drums were observed sitting on the ground and spills occurred on the surface.

Ref. Nos. 56, 57, 58, 59, 61

5. What is the permeability value of the least permeable continuous intervening stratum between the ground surface and the aquifer of concern?

The permeability of the least permeable continuous intervening stratum is approximately  $10^{-5}$  to  $10^{-7}$  cm/sec.

Ref. Nos. 52, 61, 62

6. What is the net precipitation for the area?

The net precipitation is estimated to be 13 inches.

Ref. No. 52

7. Identify uses of groundwater within 3 miles of the site (i.e., private drinking source, municipal source, commercial, industrial, irrigation, unusable).

Groundwater is used for private drinking sources, municipal water sources and for commercial/industrial purposes. The nearest well other than Metz's own well is L.R. Metals.

Ref. Nos. 48, 49, 50, 51, 55, 56, 57, 58, 59, 64, 70

8. What is the distance to and depth of the nearest well that is currently used for drinking or irrigation purposes?

Distance Approximately 2500 Feet

Depth 100 Feet

Ref. Nos. 60, 67

9. Identify the population served by the aquifer of concern within a 3-mile radius of the site.

As of December 31, 1984 the Middlesex Water Company indicated that it served a population of 196,888. Other water companies are known to also operate in the area. Therefore, it is reasonable to expect that over 200,000 people are using this aquifer within 3 miles of the site.

Ref. Nos. 48, 49, 51, 55, 56, 64

#### **SURFACE WATER ROUTE**

10. Describe the likelihood of a release of contaminant(s) to surface water as follows: observed, alleged, potential, or none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminants to the facility.

The likelihood of a release to surface water must be rated at least as potential, and, perhaps, even as observed. Metz, as outlined earlier, has had several spills. According to Metz, one of the releases, containing silver chloride, reached Metz's NPDES permitted outfall. Metz indicated that results from analysis of this discharge displayed a silver chloride concentration of 55.9 mg/l and a silver ion concentration of 3.9 mg/l. The New Jersey Water Quality Standards, which are generally more restrictive than effluent limits, set a water quality limit of 50 ug/l for this receiving stream for silver. Besides the silver chloride release, Metz has had other spills. Metz admitted that the August 25, 1982 spill of potassium hydroxide reached the receiving stream. The water quality of the stream was reportedly affected slightly. For further information on these spills, please refer to Part 1, Section 12b for greater detail.

The potential of a release occurring due to flooding is not likely. Metz is located in a Zone C floodplain, which means that any flooding would be minimal.

Ref. Nos. 2, 4, 9, 17, 21, 31, 32, 38, 42, 43, 45, 46

11. **Identify and locate the nearest downslope surface water. If possible, include a description of possible surface drainage patterns from the site.**

The nearest downstream surface water is an unnamed tributary to Bound Brook, tributary to the Raritan River. The property slopes to the west towards this unnamed tributary.

Ref. No. 67

12. **What is the facility slope in percent? (Facility slope is measured from the highest point of deposited hazardous waste to the most downhill point of the waste area or to where contamination is detected.)**

The facility slope is estimated at less than 1 percent.

Ref. Nos. 46, 47

13. **What is the slope of the intervening terrain in percent? (Intervening terrain slope is measured from the most downhill point of the waste area to the probable point of entry to surface water.)**

The slope of the intervening terrain is estimated at about 2.5 percent.

$$\frac{85 \text{ ft. MSL} - 65 \text{ ft. MSL}}{800 \text{ ft.}} \times 100 = 2.5\%$$

Ref. Nos. 46, 47

14. **What is the 1-year 24-hour rainfall?**

The 1-year 24-hour rainfall is estimated to be 2.75 inches.

Ref. No. 52

15. **What is the distance to the nearest downslope surface water? Measure the distance along a course that runoff can be expected to follow.**

The distance to the nearest surface water is estimated to be about 800 feet.

Ref. Nos. 46, 67

16. **Identify uses of surface waters within 3 miles downstream of the site (i.e., drinking, irrigation, recreation, commercial, industrial, not used).**

Bound Brook is stocked with sunfish and bullheads. Fishing derbies are held on the stream. New Market Pond is within 3 stream miles of the site and is large enough to support recreational activities, though none have been verified at this time. The State of New Jersey has designated the following uses for waters, such as Bound Brook: maintenance, migration and propagation of the natural and established biota, primary and secondary contact recreation, industrial and agricultural water supply, public potable water supply after such treatment as required by law or regulation, and any other reasonable uses.

Ref. Nos. 54, 68

17. Describe any wetlands, greater than 5 acres in area, within 2 miles downstream of the site. Include whether it is a freshwater or coastal wetland.

There are two freshwater wetlands identified by the U.S. Fish and Wildlife Service as being almost contiguous to the Metz property. One is identified as PF01, which means it is palustrine, broad - leaved, deciduous wetland. The other is designated as PSS1, which means it is palustrine, scrub - shrub, broad - leaved deciduous wetland. These wetlands were observed west of the Metz property and approximately 200 feet downstream of the site.

Ref. Nos. 53, 67

18. Describe any critical habitats of federally listed endangered species within 2 miles of the site along the migration path.

The peregrine falcon, a federally listed endangered species, is known to occur year round and breed in Middlesex County. Whether any of their species lives and breeds within 2 miles of the site is unknown. Also, the bog turtle and pine barrens tree frog, which are candidates for listing, may live in the county, but their present status is undetermined.

Ref. No. 13

19. What is the distance to the nearest sensitive environment along or contiguous to the migration path (if any exist within 2 miles)?

The distance to the nearest sensitive environment, which is a wetland, approximately 200 feet from the Metz property.

Ref. No. 53

20. Identify the population served or acres of food crops irrigated by surface water intakes within 3 miles downstream of the site and the distance to the intake(s).

There are no surface water supply intakes within 3 miles of the site.

Ref. Nos. 49, 51, 64

21. What is the state water quality classification of the water body of concern?

The water quality classification for Bound Brook is FW2-NT, which means it is fresh water and is not capable of supporting trout, due to physical, chemical or biological limitations.

Ref. No. 54

22. Describe any apparent biota contamination that is attributable to the site.

No known biota contamination has been attributed to this site.

Ref. No. 46

## AIR ROUTE

23. Describe the likelihood of a release of contaminant(s) to the air as follows: observed, alleged, potential, none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminant(s) to the facility.

Metz has had two fires onsite, and during one of those fires, a tank of hydrochloric acid was observed to be "severely fuming." The fumes did not leave Metz's premises according to NJDEP reports. The smoke from one fire was so severe that it interrupted traffic on a highway 3000 feet away. Therefore, the likelihood of an air release is rated as potential, even though part of the facility may not be in operation and air pollution control devices are provided. This rating is also based on the possibility of accidents.

Ref. Nos. 31, 32

24. What is the population within a 4-mile radius of the site?

The population within a 4-mile radius is estimated to be 146,300.

Ref. No. 47

## FIRE AND EXPLOSION

25. Describe the potential for a fire or explosion to occur with respect to the hazardous substance(s) known or suspected to be present on site. Identify the hazardous substance(s) and the method of storage or containment associated with each.

Metz has had two fires and, therefore, the likelihood of a fire exists because it stores flammable substances. One of these fires was significant and it appears from observation made during the NUS Corp. off-site reconnaissance, that the fire was so serious that the facility is still under reconstruction because of it.

Ref. Nos. 31, 32, 43

26. What is the population within a 2-mile radius of the hazardous substance(s) at the facility?

The population within a 2-mile radius is estimated to be 33,500.

Ref. No. 47

## DIRECT CONTACT/ON-SITE EXPOSURE

27. Describe the potential for direct contact with hazardous substance(s) stored in any of the waste units on site or deposited in on-site soils. Identify the hazardous substance(s) and the accessibility of the waste unit.

The potential for direct contact is rated as slight. There is extremely tight security at this facility; guards, fencing and security cameras are everywhere so, therefore direct contact with substances stored on-site is minimized. However, smoke from the fires have provided a potential for public exposure in the past.

Ref. Nos. 2, 38, 46

28. How many residents live on a property whose boundaries encompass any part of an area contaminated by the site?

There are no residents whose property abuts the Metz property. The nearest residences appear to be about 3,000 feet to the east of the property.

Ref. Nos. 46, 65, 67

29. What is the population within a 1-mile radius of the site?

The population within a 1-mile radius of the site is estimated to be 8,400.

Ref. No. 47

#### **PART IV: SITE SUMMARY AND RECOMMENDATIONS**

Metz Metallurgical, a private company that reclaims precious metals from recycled products, is located at 3900 S. Clinton Avenue in South Plainfield, New Jersey. The company is located on the western edge of a light industrial/commercial area. Metz, who began operation in 1966 and continues to operate, has had a long RCRA history due to uncertainties in its regulatory status. The plant currently appears to be under construction or remodeling after the last fire which occurred in April 1988.

Metz filed its Notice of Hazardous Waste Activity on August 18, 1980 and its Part A permit application on November 19, 1980. In its permit application Metz claimed that it had four regulated activities: S01-storage drums, T01-treatment tanks, T03-incinerators and T04-other activities. By July 2, 1982, Metz had realized that it erred in filing as a TSD facility and requested delisting from U.S. EPA. On December 5, 1983, Metz formally requested delisting from the NJDEP. On February 2, 1984, the NJDEP delisted activities designated as S01 and T03. After Metz responded to an additional information request, the NJDEP delisted activities designated as T01 and T04 on April 13, 1984. On June 26, 1985, Metz refiled the Notice of Hazardous Waste Activity.

Since 1980, the NJDEP has conducted several inspections of the Metz facility. While leaking drums have been observed, no major environmental problems were noted in the inspections. Many of the inspections resulted in the issuance of field Notices of Violation for failure to have a contingency plan, local coordination with hospitals, police and fire departments, and the like. The results of one of these inspections, with these kinds of violations, resulted in a \$700 penalty being assessed. Metz paid the fine promptly, however, some of the coordination and contingency plan violations continued to occur, even through 1987. These violations continued to occur apparently because of a failure by Metz staff to impress upon Metz management the need for these activities particularly in light of Metz's strict security measures. Metz management officials could not determine how to hold drills and inspections, yet allay its concerns over theft of precious metals.

Between 1982 and 1989 various spills and releases have occurred. These incidents were caused by accidents, such as ruptured tanks, and by fires. Metz has admitted that one spill (potassium hydroxide) reached the receiving stream and that silver chloride was discharged from its NJPDES permitted outfall. Whether any other contaminants were released off site is unknown.



#### **PART IV: SITE SUMMARY AND RECOMMENDATIONS (CONT'D)**

Wastes that Metz or the NJDEP have identified as being present include: waste hexane, silver cyanide, formaldehyde, methanol, hydrazine hydrate, waste freon TF, waste oil including some that contain PCB's, waste xylene, waste hydrazine, formic acid, fluorocarbons, filter cake, ISO-PARE, contaminated protective clothing, baghouse dust, and slag.

The extent of the releases that have occurred through the fires and spills is unknown. It is known that surface water quality has been affected and air and groundwater quality may have been affected. The population within one half mile of the site is estimated to be about 116 people.

There are no pending enforcement actions and no clean-up activities are planned. However, it should be noted that according to the off-site reconnaissance the facility appears to be under construction or reconstruction to repair damage from the April 1988.

The potential for direct contact is low. The plant is fenced, guarded and television cameras are visible everywhere. Security has been reported to be extremely tight. However, the public may have been exposed because of smoke from Metz's fires.

It should be noted that during the off-site reconnaissance conducted by NUS Corp. personnel, a pile of metal materials were observed near the northwest corner of the facility. There is no RCRA history that pertains to this pile; and no inspections or permit applications that mention this pile. The materials appear to be new construction materials, ready for installation.

For the reasons cited above, it is recommended that the site be given a **HIGH PRIORITY**. It is recommended that any existing data or information be obtained and, if warranted, an on-site reconnaissance be performed prior to any sampling of the site. It is also recommended that sampling of the receiving streams and downgradient groundwater be conducted and that the groundwater samples be collected in the monitoring well near the west edge of the property. Soil samples should be collected around the outdoor tanks and near the drum storage area of the northwest corner of the facility. In addition soil samples should be taken along any overland migration pathways found on site. Verification of current processing and on-site waste disposal activities should also be conducted.

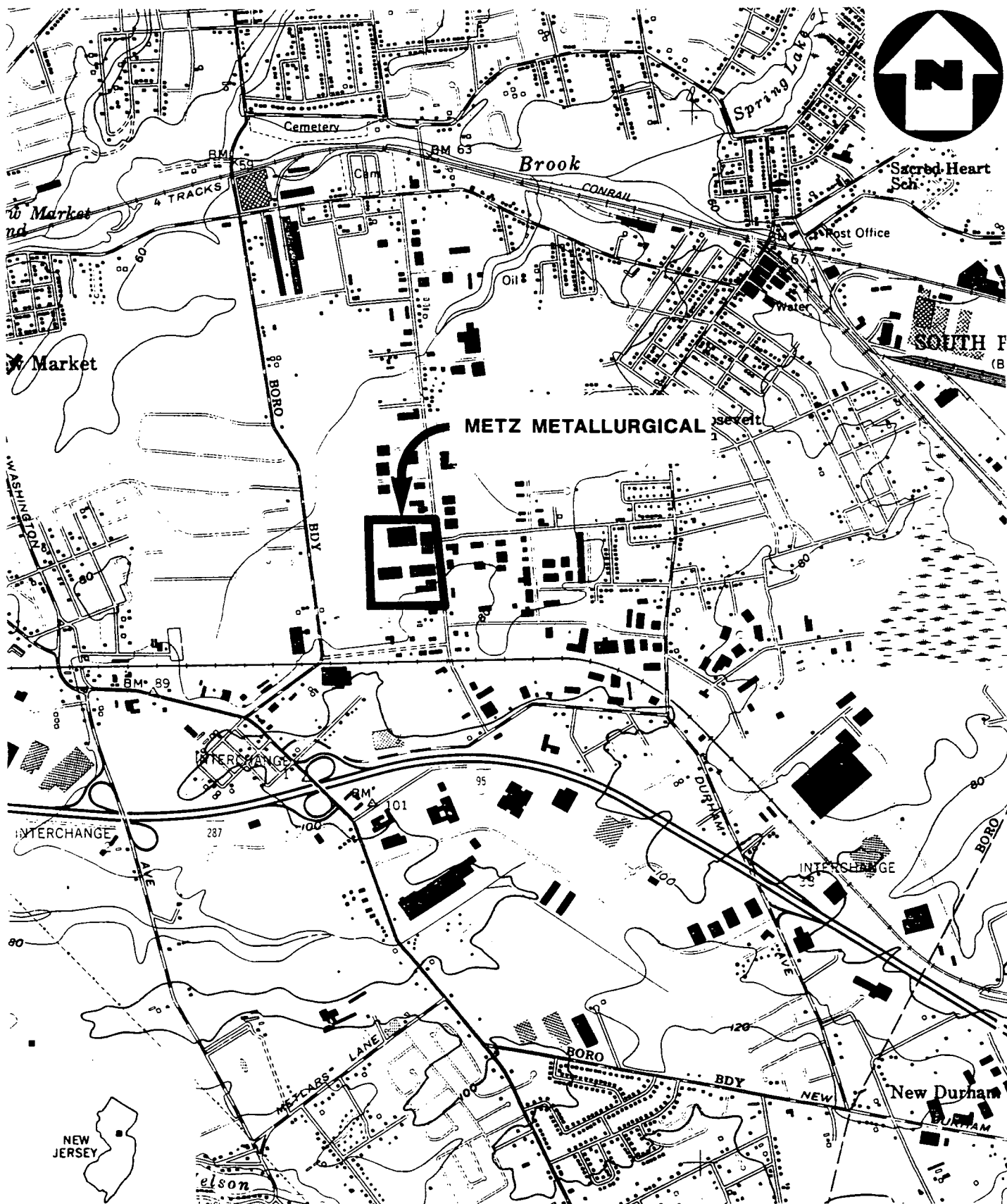


ATTACHMENT 1

METZ METALLURGICAL CO.  
SOUTH PLAINFIELD, NEW JERSEY

CONTENTS

Figure 1: Site Location Map  
Figure 2: Site Map  
Exhibit A: Photograph Log



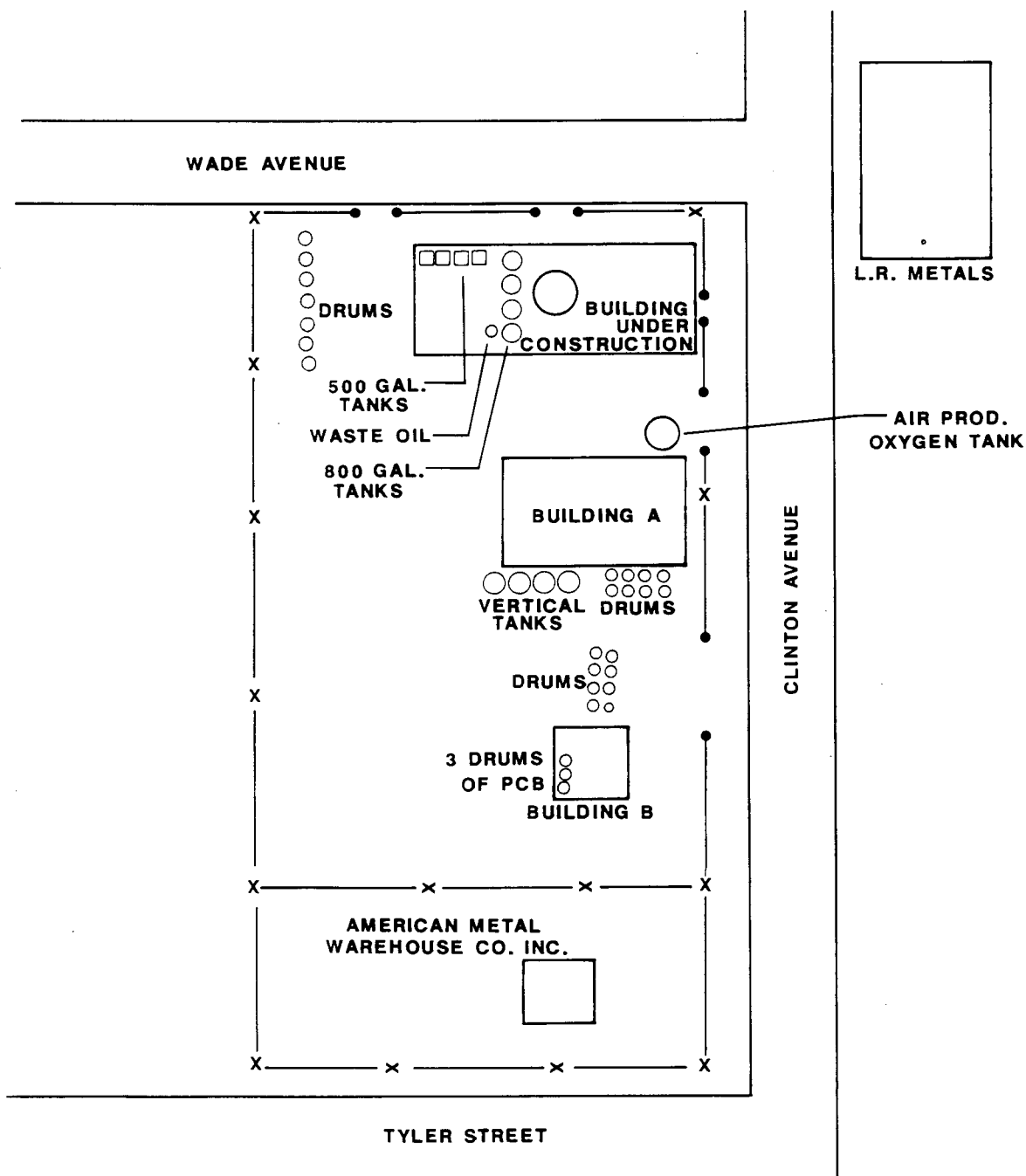
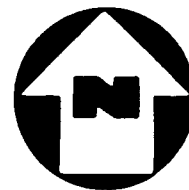
(QUAD) PLAINFIELD, N.J.

**SITE LOCATION MAP**  
**METZ METALLURGICAL**  
**SOUTH PLAINFIELD, N.J.**

SCALE: 1" = 2000'

FIGURE 1





**SITE MAP**  
**METZ METALLURGICAL,**  
**SOUTH PLAINFIELD, N.J.**

( NOT TO SCALE )

**FIGURE 2**



EXHIBIT A

PHOTOGRAPH LOG

METZ METALLURGICAL  
SOUTH PLAINFIELD, NEW JERSEY

OFF-SITE RECONNAISSANCE: JULY 25, 1989

METZ METALLURGICAL  
SOUTH PLAINFIELD, NEW JERSEY  
JULY 25, 1989

PHOTOGRAPH INDEX

<u>Photo Number</u>	<u>Description</u>	<u>Time</u>
S11 P11	NW corner showing drum storage area.	1134
S12 P12	Front of complex from Clinton and Wade Aves.	1138
S13 P13	Building B from Clinton Ave.	1141
S14 P14	Area south of Building A.	1142
S15 P15	Building A from Clinton Ave.	1143
S16 P16	Area between Building A and building under construction.	1144

All photographs taken by James Frost.

METZ METALLURGICAL CO.  
SOUTH PLAINFIELD, NEW JERSEY



S11 P11

July 25, 1989

1134

NW corner showing drum storage area.



S12 P12

July 25, 1989

1138

Front of complex from Clinton and Wade Aves.



METZ METALLURGICAL, SOUTH PLAINFIELD, NEW JERSEY



S13 P13 July 25, 1989  
Building B from Clinton Avenue.

1141



S14 P14 July 25, 1989  
Area south of Building A.

1142

METZ METALLURGICAL  
SOUTH PLAINFIELD, NEW JERSEY



S15 P15

July 25, 1989  
Building A from Clinton Avenue.

1143



S16 P16

July 25, 1989  
Area between Building A and building under construction.

1144

ATTACHMENT 2

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REFERENCE NO. 1



U.S. ENVIRONMENTAL PROTECTION AGENCY  
**NOTIFICATION OF HAZARDOUS WASTE ACTIVITY**

INSTALLATION'S EPA I.D. NO.

NJ0002195303

I. NAME OF INSTALLATION

II. INSTALLATION MAILING ADDRESS

METZ METALLURGICAL CORPORATION  
3900 SOUTH CLINTON AVE  
S PLAINFIELD, NJ 07080

III. LOCATION OF INSTALLATION

3900 SOUTH CLINTON AVE  
S PLAINFIELD, NJ 07080

**INSTRUCTIONS:** If you received a preprint label, affix it in the space at left. If any of information on the label is incorrect, draw a line through it and supply the correct information in the appropriate section below. If the label is complete and correct, leave Items I, II, and below blank. If you did not receive a preprint label, complete all items. "Installation" means: single site where hazardous waste is generated, treated, stored and/or disposed of, or a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested herein is required by law (Section 3010 of the Resource Conservation and Recovery Act).

## FOR OFFICIAL USE ONLY

## COMMENTS

INSTALLATION'S EPA I.D. NUMBER

APPROVED

DATE RECEIVED  
(yr., mo., & day)

F N J D 0 0 2 1 9 5 3 0 3

T/A S

3 1

8 0 0 8 1 8

N.J. Dept. #15305

I. NAME OF INSTALLATION

M E T Z M E T A L L U R G I C A L C O R P O R A T I O N

II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX

3 3 9 0 0 S O . C L I N T O N A V E N U E

CITY OR TOWN

4 S O . P L A I N F I E L D

ST.

ZIP CODE

N J

0 7 0 8 0

III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER

5 S A M E

CITY OR TOWN

6

ST.

ZIP CODE

IV. INSTALLATION CONTACT

NAME AND TITLE (last, first, &amp; job title)

2 E . P E T E R B E C K E R , E X E C . V . P R E S .

PHONE NO. (area code &amp; no.)

2 0 1 - 5 6 1 - 1 1 0 0

V. OWNERSHIP

A. NAME OF INSTALLATION'S LEGAL OWNER

8 M E T Z M E T A L L U R G I C A L C O R P .

B. TYPE OF OWNERSHIP  
(enter the appropriate letter into box)F = FEDERAL  
M = NON-FEDERAL

M

VI. TYPE OF HAZARDOUS WASTE ACTIVITY (enter "X" in the appropriate box(es))

☐ A. GENERATION☐ B. TRANSPORTATION (complete item VII)☒ C. TREAT/STORE/DISPOSE☐ D. UNDERGROUND INJECTION

VII. MODE OF TRANSPORTATION (transporters only - enter "X" in the appropriate box(es))

☐ A. AIR☐ B. RAIL☐ C. HIGHWAY☐ D. WATER☐ E. OTHER (specify):

VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your installation's EPA I.D. Number in the space provided below.

☒ A. FIRST NOTIFICATION☐ B. SUBSEQUENT NOTIFICATION (complete item C)

C. INSTALLATION'S EPA I.D. NO.

N J 0 0 0 2 1 9 5 3 0 3

IX. DESCRIPTION OF HAZARDOUS WASTES

Please go to the reverse of this form and provide the requested information.

W N J 000219530321

**IX. DESCRIPTION OF HAZARDOUS WASTES** (continued from front)**A. HAZARDOUS WASTES FROM NON-SPECIFIC SOURCES.** Enter the four-digit number from 40 CFR Part 261.31 for each listed hazardous waste from non-specific sources your installation handles. Use additional sheets if necessary.

1 F 0 0 1 23 - 24	2 23 - 24	3 23 - 24	4 23 - 24	5 23 - 24	6 23 - 24
7 23 - 24	8 23 - 24	9 23 - 24	10 23 - 24	11 23 - 24	12 23 - 24

**B. HAZARDOUS WASTES FROM SPECIFIC SOURCES.** Enter the four-digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

13 23 - 24	14 23 - 24	15 23 - 24	16 23 - 24	17 23 - 24	18 23 - 24
19 23 - 24	20 23 - 24	21 23 - 24	22 23 - 24	23 23 - 24	24 23 - 24
25 23 - 24	26 23 - 24	27 23 - 24	28 23 - 24	29 23 - 24	30 23 - 24

**C. COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES.** Enter the four-digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31 23 - 24	32 P 1 0 4 23 - 24	33 U 1 2 2 23 - 24	34 U 1 3 3 23 - 24	35 U 1 5 4 23 - 24	36 U 2 3 9 23 - 24
37 23 - 24	38 23 - 24	39 23 - 24	40 23 - 24	41 23 - 24	42 23 - 24
43 23 - 24	44 23 - 24	45 23 - 24	46 23 - 24	47 23 - 24	48 23 - 24

**D. LISTED INFECTIOUS WASTES.** Enter the four-digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

49 23 - 24	50 23 - 24	51 23 - 24	52 23 - 24	53 23 - 24	54 23 - 24
---------------	---------------	---------------	---------------	---------------	---------------

**E. CHARACTERISTICS OF NON-LISTED HAZARDOUS WASTES.** Mark "X" in the boxes corresponding to the characteristics of non-listed hazardous wastes your installation handles. (See 40 CFR Parts 261.21 - 261.24.)☐ 1. IGNITABLE  
(D001)☒ 2. CORROSIVE  
(D002)☐ 3. REACTIVE  
(D003)☐ 4. TOXIC  
(D000)**X. CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE

W. Peter Metz

NAME &amp; OFFICIAL TITLE (type or print)

W. PETER METZ, PRESIDENT

DATE SIGNED

Aug 29, 1988

 NEW YORK, N.Y. 10007  
 ENVIRONMENTAL PROTECTION AGENCY  
 AUG 29 12 54 PM '88

RP

REFERENCE NO. 2

RCRA TREATMENT, STORAGE AND DISPOSAL FACILITY INSPECTION FORM  
FOR TSD FACILITIES ONLY

COMPANY NAME: metz metallurgical corp EPA I.D. NUMBER: NY DEC 195302

COMPANY ADDRESS: 300 So Clinton Ave / S. Plainfield

COMPANY CONTACT OR OFFICIAL: RUEI MAZUR

OTHER ENVIRONMENTAL PERMITS HELD

BY FACILITY: ☒ NPDES

TITLE: Plant Engineer

☒ AIR

☐ OTHER

INSPECTOR'S NAME: Bob Jantc

DATE OF INSPECTION: 2/5/82

BRANCH/ORGANIZATION: NY DEC

TIME OF DAY INSPECTION TOOK PLACE:

11:30 AM

(1) Is there reason to believe that the facility has hazardous waste on site? Yes

a. If yes, what leads you to believe it is hazardous waste?  
Check appropriate box:

☒ Company admits that its waste is hazardous during the inspection.

☒ Company admitted the waste is hazardous in its RCRA notification and/or Part A Permit Application.

☒ The waste material is listed in the regulations as a hazardous waste from a nonspecific source (§261.31)

☐ The waste material is listed in the regulations as a hazardous waste from a specific source (§261.32)

☒ The material or product is listed in the regulations as a discarded commercial chemical product (§261.33)

☒ EPA testing has shown characteristics of ignitability, corrosivity, reactivity or extraction procedure toxicity, or has revealed hazardous constituents (please attach analysis report)

☐ Company is unsure but there is reason to believe that waste materials are hazardous. (Explain)

b. Is there reason to believe that there are hazardous wastes on-site which the company claims are merely products or raw materials?

YES NO DON'T KNOW

— ☒ —

Please explain:

c. Identify the hazardous wastes that are on-site, and estimate approximate quantities of each.

(2) Does the facility generate hazardous waste? — ☒ —

(3) Does the facility transport hazardous waste? — ☒ —

(4) Does the facility treat, store or dispose of hazardous waste? ☒ — —

VISUAL OBSERVATIONS

- |   | YES                                 | NO                                  | DON'T<br>KNOW            |
|---|-------------------------------------|-------------------------------------|--------------------------|
| (5) <u>SITE SECURITY</u> (§265.14)  |                                     |                                     |                          |
| a. Is there a 24-hour surveillance system?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b. Is there a suitable barrier which completely surrounds the active portion of the facility? <i>yes, fence</i>     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c. Are there "Danger-Unauthorized Personnel Keep Out" signs posted at each entrance to the facility?                | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| (6) Are there ignitable, reactive or incompatible wastes on site? (§265.27)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| a. If "YES", what are the approximate quantities?   |                                     |                                     |                          |
| b. If "YES", have precautions been taken to prevent accidental ignition or reaction of ignitable or reactive waste? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c. If "YES", explain <i>5 drums of ignitable waste</i>  |                                     |                                     |                          |
| d. In your opinion, are proper precautions taken so that these wastes do not:                                       |                                     |                                     |                          |
| - generate extreme heat or pressure, fire or explosion, or violent reaction?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> |
| - produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health?       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| - produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions?      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| - damage the structural integrity of the device or facility containing the waste?                                   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| - threaten human health or the environment?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

Please explain your answers, and comment if necessary.

- e. Are there any additional precautions which you would recommend to improve hazardous waste handling procedures at the facility? */*
- (7) Does the facility comply with preparedness and prevention requirements including maintaining: (§265.32)

YES	NO	DONT KNOW
-----	----	--------------

- an internal communications or alarm system? ☒ ☐ ☐
- a telephone or other device to summon emergency assistance from local authorities? ☒ ☐ ☐
- portable fire equipment? ☒ ☐ ☐
- adequate aisle space? ☒ ☐ ☐
- in your opinion, do the types of wastes on site require all of the above procedures, or are some not needed? Explain. ☒ ☐ ☐  
*They have all of the above*

In your opinion, do the types of wastes on site require all of the above procedures, or are some not needed? Explain. *see above*

- \* (8) Have you inspected to verify that the groundwater monitoring wells (if any) mentioned in the facility's groundwater monitoring plan (see no. 19 below) are properly installed? *NA* ☐ ☐ ☐

If you have, please comment, as appropriate. ☐ ☐ ☐

- (9) a. Is there any reason to believe that groundwater contamination already exists from this facility? If "YES", explain. ☐ ☒ ☐
- b. Do you believe that operation of this facility may affect groundwater quality? ☐ ☐ ☒
- c. If "YES", explain. ☐ ☐ ☐

#### RECORDS INSPECTION

- (10) Has the facility received hazardous waste from an off-site source since Nov. 19, 1980 (effective date of the regulations)? *NA* ☐ ☐ ☐
- a. If "YES", does it appear that the facility has a copy of a manifest for each hazardous waste load received? ☐ ☐ ☐
- b. How many post-November 19 manifests does it have? (If the number is large, you may estimate)  
*4 or more generated*
- c. Does each manifest (or a representative sample) have the following information?
- a manifest document number ☒ ☐ ☐

\* This requirement applies only after November 19, 1981.

the generator's name, mailing address, telephone number, and EPA identification number

the name, and EPA identification number of each transporter

the name, address and EPA identification number of the designated facility and an alternate facility, if any;

a DOT description of the wastes

the total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle

a certification that the materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation under regulations of the Department of Transportation and the EPA

Are there any indications that unmanifested hazardous wastes have been received since November 19, 1980? If YES, explain.

Does the facility have a written waste analysis plan specifying test methods, sampling methods and sampling frequency? (§265.13)

a. Does the character of wastes handled at the facility change from day to day, week to week, etc., thus requiring frequent testing? (You may check more than one)  
Waste characteristics vary \_\_\_\_\_  
All wastes are basically the same \_\_\_\_\_  
Company treats all waste as hazardous \_\_\_\_\_  
Don't know \_\_\_\_\_

b. Does hazardous waste come to this facility from off-site sources?

c. If waste comes from an off-site source, are there procedures in the plan to insure that wastes received conform to the accompanying manifest?

## 12) INSPECTIONS (§265.15)

a. Does the facility have a written inspection schedule?

b. Does the schedule identify the types of problems to be looked for and the frequency for inspections?

c. Does the owner/operator record inspections in a log?

d. Is there evidence that problems reported in the inspection log have not been remedied? If "YES," please explain.

(13) PERSONNEL TRAINING (§265.16)

a. Is there written documentation of the following:

- job title for each position at the facility related to hazardous waste management and the name of the employee filling each job?          /
- type and amount of training to be given to personnel in jobs related to hazardous waste management?
- actual training or experience received by personnel?

(14) Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosion or any unplanned release of hazardous waste?  
(§265.51)

a. Does the plan describe arrangements made with local authorities?                     b. Has the contingency plan been submitted to local authorities?                     How do you know?                     c. Does the plan list names, addresses, and phone numbers of Emergency Coordinators?                     d. Does the plan have a list of what emergency equipment is available?                     e. Is there a provision for evacuating facility personnel?                     f. Was an Emergency Coordinator present or on call at the time of the inspection?                     

(15) Does the owner/operator keep a written operating record with: (§265.73)

- a description of wastes received with methods and dates of treatment, storage or disposal?   NR                - location and quantity of each waste?   NR                - detailed records and results of waste analysis and treatability tests performed on wastes coming into the facility?   NR                - detailed operating summary reports and description of all emergency incidents that required the implementation of the facility contingency plan?   NR                

(16) Does the facility have written closure and post-closure plans? (§265.110)

a. Does the written closure plan include:

- a description of how and when the facility will be partially (if applicable) and ultimately closed?

\* Effective date for this requirement is May 19, 1981.



- an estimate of the maximum inventory of wastes in storage or treatment at any time during the life of the facility? \_\_\_
- a description of the steps necessary to decontaminate facility equipment during closure? \_\_\_
- a schedule for final closure including the anticipated date when wastes will no longer be received and when final closure will be completed? \_\_\_
- b. What is the anticipated date for final closure? \_\_\_
- 1c. Does the owner/operator have a written post-closure plan identifying the activities which will be carried on after closure and the frequency of these activities? NP \_\_\_
- d. Does the written post-closure plan include:
  - a description of planned groundwater monitoring activities and their frequencies during post-closure? \_\_\_
  - a description of planned maintenance activities and frequencies to ensure integrity of final cover during post-closure? \_\_\_
  - the name, address and phone number of a person or office to contact during post-closure? \_\_\_
- \*(17) Does the owner/operator have a written estimate of the cost of closing the facility? (§265.142) What is it? \_\_\_ ✓ \_\_\_
- \*(18) Does the owner/operator have a written estimate of the cost for post-closure monitoring and maintenance? What is it? (§265.144) NP \_\_\_
- \*(19) Has a groundwater monitoring plan been submitted to the Regional Administrator for facilities containing a surface impoundment, landfill or land treatment process? (This requirement does not apply to recycling facilities.) (§265.90) NP \_\_\_
  - a. Does the plan indicate that at least one monitoring well has been installed hydraulically upgradient from the limit of the waste management area? \_\_\_
  - b. Does the plan indicate that there are at least three monitoring wells installed hydraulically downgradient at the limit of the waste management area? \_\_\_

\* This section applies only to disposal facilities.

\* Effective date for this requirement is May 19, 1981.

SITE-SPECIFIC

Please circle all appropriate activities and answer questions on indicated pages for all activities circled. When you submit your report, include only those site-specific pages that you have used.

<u>STORAGE</u>	<u>TREATMENT</u>	<u>DISPOSAL</u>
Waste Pile p. 9	Tank p. 8	Landfill pp. 10-11
Surface Impoundment p. 8	Surface Impoundment pp. 8-9	Land Treatment pp. 9, 10
<u>Container p. 7</u>	Incineration pp. 12-13	Surface Impoundment p. 8
Tank, above ground p. 8	Thermal Treatment pp. 12-13	Other _____
Tank, below ground p. 8	Land Treatment pp. 9-10	
Other _____	Chemical, Physical p. 13 and Biological Treatment (other than in tanks, surface impoundment or land treatment facilities)	YES NO DON'T KNOW
	Other _____	

CONTAINERS (\$265.170)

1. Are there any leaking containers?  
If "YES", explain. — ✓ —
2. Are there any containers which appear in danger of leaking?  
If "YES", explain. — ✓ —
3. Do wastes appear compatible with container materials? ✓ — —
4. Are all containers closed except those in use? ✓ — —
5. Do containers appear to be opened, handled or stored in a manner which may rupture the containers or cause them to leak? — ✓ —
6. How often does the plant manager claim to inspect container storage areas? *once a day* — — —
7. Does it appear that incompatible wastes are being stored in close proximity to one another?  
If "YES", explain. — ✓ —
8. Are containers holding ignitable or reactive wastes located at least 15 meters (50 feet) from the facility's property line? ✓ — —
9. What is the approximate number and size of containers with hazardous wastes? *4 1000 gal* — — —

<u>TANKS (\$265.190)</u>		<u>YES</u>	<u>NO</u>	<u>DON'T KNOW</u>
1.	Are there any leaking tanks? If "YES", explain.	—	—	—
2.	Are there any tanks which appear in danger of leaking. If "YES", explain.	—	—	—
3.	Are wastes or treatment reagents being placed in tanks which could cause them to rupture, leak, corrode or otherwise fail? If "YES", explain.	—	—	—
4.	Do uncovered tanks have at least 2 feet of freeboard or an adequate containment structure?	—	—	—
5.	Where hazardous waste is continuously fed into a tank, is the tank equipped with a means to stop this inflow?	—	—	—
6.	Does it appear that incompatible wastes are being stored in close proximity to one another, or in the same tank? If "YES", explain.	—	—	—
7.	How often does the plant manager claim to inspect container storage areas?	—	—	—
8.	Are ignitable or reactive wastes stored in a manner which protects them from a source of ignition or reaction? If "YES", explain.	—	—	—
9.	What is the approximate number and size of tanks containing hazardous wastes?	—	—	—

<u>SURFACE IMPOUNDMENTS (\$265.220)</u>		<u>YES</u>	<u>NO</u>	<u>DON'T KNOW</u>
1.	Is there at least 2 feet of freeboard in the impoundment?	—	—	—
2.	Do all earthen dikes have a protective cover to preserve their structural integrity? If "YES", specify type of covering.	—	—	—
3.	Is there reason to believe that incompatible wastes are being placed in the same surface impoundment? If "YES", explain.	—	—	—

4. Are ignitable or reactive wastes being placed in surface impoundments without being treated to remove these characteristics?  
If "YES", explain.

5. Are there any leaks, failures or is there any deterioration in the impoundments?  
If "YES", explain.

6. Give the approximate size of surface impoundments (gallons or cubic feet).

#### WASTE PILES (§265.250)

1. Is the waste pile protected from wind erosion?
- a. Does it appear to need such protection?
- b. Explain what type of protection exists.
2. Does it appear that incompatible wastes are being stored in the same waste pile?  
If "YES", explain.
3. Is leachate run-off from a pile a hazardous waste?  
If "YES", explain this determination and answer (a) and (b) below.
- a. Is the pile placed on an impermeable base that is compatible with the waste?
- b. Is the pile protected from precipitation and run-on?
4. In your judgment, are ignitable or reactive wastes managed in such a way that they are protected from any material or conditions which may cause them to ignite?  
Please explain or indicate if no such wastes are present.

Are they placed on an existing pile so that they no longer meet the definition of ignitable or reactive waste?  
Please explain.

5. How many waste piles are on site, and approximately how large are they?

#### LAND TREATMENT (§265.270)

1. Can the facility operator demonstrate that the hazardous waste has been made less or non-hazardous by biological degradation or chemical reactions occurring in or on the soil?  
Please explain.

- |   |     |     |     |
|---|-----|-----|-----|
| *2. Is run-on diverted away from the active portions of the land treatment facility?  | ___ | ___ | ___ |
| *3. Is run-off collected?   | ___ | ___ | ___ |
| 4. Are food chain crops being grown on the facility property?   | ___ | ___ | ___ |
| a. If "YES", can the facility operator document that arsenic, lead and mercury:   |     |     |     |
| - will not be transferred to the crop or ingested by food chain animals or  | ___ | ___ | ___ |
| - will not occur in greater concentrations in the crops grown on the land treatment facility than in the same crops grown on untreated soils.       | ___ | ___ | ___ |
| b. Has notification of the growing of the food chain crops been made to the Regional Administrator?   | ___ | ___ | ___ |
| 5. Is there a written and implemented plan for unsaturated zone monitoring?   | ___ | ___ | ___ |
| 6. Are there records of the application dates, application rates, quantities and location of each hazardous waste placed in the facility?           | ___ | ___ | ___ |
| 7. Do the closure and post-closure plans address:   |     |     |     |
| a. control of migration of hazardous wastes into the groundwater?   | ___ | ___ | ___ |
| b. control of run-off, release of airborne particulate contaminants?  | ___ | ___ | ___ |
| c. compliance with requirements for the growth of food-chain crops (if they are present)?   | ___ | ___ | ___ |
| 8. Is ignitable or reactive waste immediately incorporated into the soil so the resulting waste no longer meets that definition? If "YES", explain. | ___ | ___ | ___ |
| 9. Are incompatible wastes placed in the same land treatment area? If "YES", explain.   | ___ | ___ | ___ |
| 10. What is the area of the land receiving hazardous waste treatment?   | ___ | ___ | ___ |

#### LANDFILLS (5265.300)

- |   |     |     |     |
|---|-----|-----|-----|
| *1. Is run-on diverted away from the active portions of the landfill? | ___ | ___ | ___ |
| *2. Is run-off from active portions of the landfill collected?        | ___ | ___ | ___ |

\* Effective date for these requirements is May 19, 1981.

\* These requirements are effective November 19, 1981.

- |   |       |       |       |
|---|-------|-------|-------|
| 3. Is waste which is subject to wind dispersal controlled?<br>Explain.  | _____ | _____ | _____ |
| 4. Does the owner/operator maintain a map with:   |       |       |       |
| - the exact location and dimensions of each cell  | _____ | _____ | _____ |
| - the contents of each cell and approximate location of each hazardous waste type   | _____ | _____ | _____ |
| 5. Do the closure and post-closure plans address:   |       |       |       |
| - control of pollutant migration via ground water?  | _____ | _____ | _____ |
| - control of surface water infiltration?  | _____ | _____ | _____ |
| - prevention of erosion?  | _____ | _____ | _____ |
| 6. Is ignitable or reactive waste treated before being placed in the landfill?<br>Explain how you know.   | _____ | _____ | _____ |
| 7. Are precautions taken to insure that incompatible wastes are not placed in the same landfill cell?<br>If "NO", explain.  | _____ | _____ | _____ |
| 8. Are bulk or non-containerized wastes containing free liquids placed in the landfill?<br>If "YES",  | _____ | _____ | _____ |
| a. Does the landfill have a liner which is chemically and physically resistant to the added liquid?   | _____ | _____ | _____ |
| b. Is the waste treated and stabilized so that free liquids are no longer present?  | _____ | _____ | _____ |
| *9. Are containers holding liquid waste or waste containing free liquids placed in the landfill?  | _____ | _____ | _____ |
| 10. Are empty containers (e.g. those containing less than 1/2 inch of liquid) placed in the landfills?<br><br>If so, are they crushed flat, shredded or similarly reduced in volume before they are buried? | _____ | _____ | _____ |
| 11. What is the approximate area of the hazardous waste landfill?   |       |       |       |

\* Effective date for this requirement is November 19, 1981.

INCINERATORS AND THERMAL TREATMENT  
(55855.340 and 265.379)

	<u>YES</u>	<u>NO</u>	<u>DON'T KNOW</u>
1. What type of incinerator or thermal treatment is at the site (e.g. waterwall incinerator, boiler, fluidized bed, etc.)?			
2. Was hazardous waste being incinerated or thermally treated during your inspection? If "YES", answer all following questions. If "NO", answer only questions 3 and 7.	—	—	—
3. Has waste analysis been performed (and written records kept) to include:			
- heating value of the waste	—	—	—
- halogen content	—	—	—
- sulfur content	—	—	—
- concentration of lead	—	—	—
- concentration of mercury	—	—	—
NOTE: Waste analysis need not be performed on each waste load if if there are documented data available to show waste characteristics that do not vary. If there are such documented data available, check here <input type="checkbox"/> .			
4. Does it appear that the owner/operator brings his thermal treatment process to steady state (normal) conditions of operation before introducing hazardous wastes?	—	—	—
5. Did it appear during your inspection that there was adequate monitoring and inspection by owner/operator every 15 minutes during hazardous waste incineration for:			
- waste feed	—	—	—
- auxiliary fuel feed	—	—	—
- air flow	—	—	—
- incinerator temperature	—	—	—
- scrubber flow	—	—	—
- scrubber pH	—	—	—
- relevant level controls	—	—	—
Every hour for:			
- stack plume (color and opacity)	—	—	—
5. Is there open burning of hazardous waste?	—	—	—

- a. If "YES", what is being burned?  
(only burning or detonation  
of explosives is permitted)
- b. If open burning or detonation of explosives is taking  
place, approximately what is the distance from the open  
burning or detonation to the property of others?

- |  | <u>YES</u> | <u>NO</u> | <u>DON'T<br/>KNOW</u> |
|--|------------|-----------|-----------------------|
| 6. Does the incinerator appear to be operating<br>properly? (Do emergency shutdown controls<br>and system alarms seem to be in good working<br>order?) Please explain. | —          | —         | —                     |
| a. Is there any evidence of fugitive emissions?  | —          | —         | —                     |
| 7. Is the residue from the incinerator treated<br>by the owner as a hazardous waste?<br>Please explain.  | —          | —         | —                     |
| 8. What types of air pollution control devices (if any)<br>are installed on the incinerator?   |            |           |                       |

CHEMICAL, PHYSICAL AND BIOLOGICAL TREATMENT (\$265.400)

- |  |   |   |   |
|--|---|---|---|
| 1. Does the treatment process system show any<br>signs of ruptures, leaks, or corrosion?<br>Please explain.                                    | — | — | — |
| 2. Is there a means to stop the inflow of<br>continuously-fed hazardous wastes?  | — | — | — |
| 3. Is there ignitable or reactive waste fed<br>into the treatment system?  | — | — | — |
| If "YES", has it been treated or protected<br>from any material or conditions which may<br>cause it to ignite or react? If so,<br>explain how. | — | — | — |
| Are the incompatible wastes placed in<br>the same treatment process?<br>If "YES", explain.   | — | — | — |
| 5. Describe the treatment system at this facility.   |   |   |   |



REFERENCE NO. 3

# Metz Metallurgical Corporation



3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N.J. 07080 / (201) 561-1100 / TWX: 710-997-9524

July 2, 1982

Dr. Richard Baker  
Chief of Permits Administration  
United States Environmental Protection Agency  
Region II  
26 Federal Plaza  
New York, NY 10278

Dear Dr. Baker:

*JA HWOMs 9/29/82*  
As you are well aware, according to subtitle C of the Resource Conservation and Recovery Act (RCRA), Metz Metallurgical Corp. (EPA ID No. N.JD002195303) is required to fulfill its financial requirements as a Hazardous Waste Treatment-Storage-Disposal (T-S-D) facility by July 6, 1982. After much deliberation, Metz Metallurgical has determined that it is not a T-S-D facility and therefore asks to be reclassified as a generator.

Metz Metallurgical is a manufacturer of precious metals and as such; all our by-products are recyclable. We burn our by-products and our customers by-products in an incinerator; collect the ash and reprocess it, as described in the T-S-D Federal application.

Metz Metallurgical applied for a T-S-D facility status because we store chemical compounds listed in CFR - Title 40, Part 261.33. These chemical compounds are as follows: silver cyanide, formaldehyde, methanol, hydrazine hydrate and freon TF. The silver cyanide, formaldehyde and hydrazine hydrate are reagents and are consumed in our operations. Freon TF is used as a degreaser. The waste from freon TF is stored and transported off site to be distilled in accordance with The Hazardous Waste Manifest System. Methanol is used as a drying agent. The by-product methanol is burned for its heat content.

Metz Metallurgical Corporation is very willing to do whatever has to be done to abide by RCRA, and it would appreciate your help in amending our application to a generator status.

If you have any questions please do not hesitate to give us a call at 201-561-1100.

Sincerely,

METZ METALLURGICAL CORPORATION

*E. Peter Becker*  
E. Peter Becker  
Executive Vice President

EPB:kc

REFERENCE NO. 4

Ref 9/9/82

## INCIDENT REPORT

D.W.M. ASSIGNED CASE NUMBER		812-108-25-003	HOT LINE <input type="checkbox"/>	INDEXED <input type="checkbox"/>
DATE	TIME (Military)	D.W.M. ID NO.		
08-25-82	11420	11240		

## INCIDENT REPORTED BY:

NAME		PHONE
Leo KENBZERSKI		201-756-7401
AFFILIATION		CODE
Dispatcher		
STREET		
123 maple Ave		
CITY	STATE	ZIP CODE
South Plainfield	N.J.	

## INCIDENT LOCATION:

NAME		PHONE	
WATER METALLURGICAL CORP.			
STREET		UTM VERT	UTM HORIZ
3900 South CLIMAX AVE			
CITY	COUNTY	STATE	ZIP CODE
South Plainfield			

SOURCE OF SPILLED AND/OR DISCHARGED SUBSTANCE: ☐ Confirmed ☐ Alleged ☐ More Than 1 Source

COMPANY NAME		PHONE	
metz metallurgical corp.		201-561-1100	
CONTACT	TITLE		
Dave Berry	Env US Pres		
STREET		DEP COMPANY NO.	
3900 South CLIMAX AVE			
CITY	COUNTY	STATE	ZIP CODE
South Plainfield		N.J.	

SUSPECTED SPILLED AND/OR DISCHARGED SUBSTANCE: ☐ Confirmed ☐ Alleged ☐ More Than 2 Substances

1. Castic Pot ASH.			SUBSTANCE NO.
AMOUNT SPILLED	UNITS	A/P/E	S/L/G/M
500	gals		
2.			SUBSTANCE NO.
AMOUNT SPILLED	UNITS	A/P/E	S/L/G/M

DATE OF INCIDENT	TIME (Military)	TEMP.	WEATHER	WIND (Dir. & Vel.)
08-25-82	1330			
SPILL ORIGIN				CODE
Tank Truck was transferring product				
CAUSE				CODE
Storage Failure.				
WATER BODY AFFECTED				CODE
Storm Sewer and THEN INTO a Creek.				
ASSOCIATED FIRE AND/OR HAZARDS				

## INCIDENT REFERRED TO:

AGENCY	PHONE
CONTACT	AGENCY CODE

PRIMARY D.W.M. INVESTIGATOR	FOLLOWUP
NO FURTHER ACTION	DATE

## COMMENTS:

John BURKHAM. Fire Dept went Fire map	
1530-1630 - 1210 + 1250 on site - (KOH) 1100 gals contained	
on site in culvert and pond. to be neutral	
w/ H <sub>2</sub> O <sub>2</sub> and pushed through on site	
treatment facility.	

INCIDENT FOLLOWUP REPORT

D.W.M. CASE NUMBER	82-08-25-003	D.W.M. ID NO.	
PHONE INVESTIGATION DATE	018-125-812	FIRST ON-SCENE INVESTIGATION DATE	018-128-812

AGENCY CONTACTED: More Than 3 Agencies ☐

AGENCY	Middlesex County Health Department	PHONE	201-528-8100
CONTACT	Lozlo Szabo / Mr.	AGENCY CODE	
AGENCY	South Plainfield H/H	PHONE	201-350-7400
CONTACT	Rep Cohen 1509 hours	AGENCY CODE	
AGENCY		PHONE	
CONTACT		AGENCY CODE	

PERSON OR COMPANY RESPONSIBLE FOR SPILL: (Revised) ☐ More Than One Source ☐

COMPANY NAME	METZ METALLURGICAL CORP.	PHONE	201-561-1100
CONTACT		TITLE	
STREET		DEP COMPANY NO.	
CITY		COUNTY	STATE ZIP CODE

ACTUAL SPILL OR DISCHARGE LOCATION: (Revised) ☐

NAME		PHONE	
STREET		UTM VERT	UTM HORIZ
CITY		STATE	ZIP CODE

OWNER OF SPILL OR DISCHARGE LOCATION

NAME		PHONE	
STREET			
CITY		STATE	ZIP CODE

SUBSTANCE SPILLED AND/OR DISCHARGED: (Revised) ☐ More Than 2 Substances ☐

1.	AMOUNT SPILLED	UNITS	A/P/E	SUBSTANCE NO.
				S/L/G/M
2.	AMOUNT SPILLED	UNITS	A/P/E	SUBSTANCE NO.
				S/L/G/M

SPILL ORIGIN	(Revised) <input type="checkbox"/>	CODE	
CAUSE	(Revised) <input type="checkbox"/>	CODE	
WATERBODY AFFECTED	(Revised) <input type="checkbox"/>	CODE	

NO FURTHER ACTION		DATE	
-------------------	--	------	--

CONCLUSIONS, RECOMMENDATIONS, COMMENTS


REFERENCE NO. 5

**MEMO**

NEW JERSEY STATE DEPARTMENT

OF ENVIRONMENTAL PROTECTION

TO Spill File

FROM Karl J. Delaney DATE September 3, 1982

SUBJECT Metz Metallurgical Corporation (M.M.C.)  
S. Plainfield, NJ  
DWM #82-08-25-003

August 25, 1982

1439 Hours

The writer, accompanied by John DeFina, <sup>0125</sup>~~was~~ contacted by Trenton Dispatch via radio. The writer telephoned David Bute, Duty Officer, who informed that a spill of 500 gallons of a caustic potash solution had been spilled at the subject site. The liquid allegedly drained to a storm drain and subsequently to an on site pond. Notification was made to the Department by the South Plainfield Fire Department and not by the responsible party.

1530 Hours

The writer and DeFina arrive at the subject site and met with Mr. David Berry, Executive Vice President of the subject company.

1551 Hours

The writer is escorted to Mr. Peter Becher who is coordinating the cleanup for M.M.C. Mr. Becher states that the released material was approximately 500 gallons (possibly up to 1,100 gallons) of potassium hydroxide. The release occurred during product transfer from an A.H. Mathieu Inc., of Riverdale, New Jersey tank trailer, to a vertical 6,000 gallon tank. During transfer the vertical tank developed a leak and discharged the material to the soil. The material then flowed into a nearby excavation from which it entered a drain pipe and subsequently discharged to an on site pond.

The writer performed pH testing of the pond water (pH 14), adjacent ditch (pH 11) and adjacent swampy area (pH 7). M.M.C. personnel were using gasoline driven pumps to pump the material back into the facility to a 25,000 gallon storage tank. Mr. Becher stated that the liquid would then be neutralized with HNO<sub>3</sub> and passed through the on site water treatment system.

Bob Kunz, Somerset County Health Department, approaches the writer and states that he will insure proper compliance with the township regulations and New Jersey state regulations as they pertain to the cleanup of the site.

1630 Hours

Writer and DeFina secure the site.

KJD:lmc

**MEMO**

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

TO SPILL FILE DWM #82-08-25-00  
FROM KARL J. DELANEY DATE SEPTEMBER 7, 1982  
SUBJECT METZ METALLURGICAL

SEPTEMBER 3, 1982

The writer telephones Bob Kunz to determine whether he has monitored the subject site since the noted spill incident. Mr. Kunz says he has not. The writer informed Mr. Kunz that a final inspection will be performed within the coming week.

SEPTEMBER 7, 1982

The writer arrives on site and meets with Mr. David Berry, Vice-President, and Mr. Noel Mazar, Plant Engineer. The writer requested of and was escorted by Mr. Mazar on a site reinspection to determine compliance with cleanup recommendations.

Mr. Mazar stated that the initial cause of the release was determined to be a rupture in the fiberglass storage tank. Owens-Corning inspectors allegedly surmised that the KOH acted directly on the tank, thereby weakening same.

There was a large quantity of liquid remaining in the previously described excavation and this was being pumped by workers, to the ditches at the rear of the property. A pH test of the material demonstrated a pH level of approximately 12. The writer confronted Mr. Mazar on this, and he halted the pumping immediately. The material was supposed to have been pumped to the Liquid Waste Treatment (LWT) plant on site. Proper pumping commenced. Mr. Mazar mustered several plant personnel who brought a pump and line to the ditches and pond at the rear of the site. The liquid (pH 9-12) then began being pumped back to the on-site storage pending LWT treatment.

The writer provided Mr. Berry and Mr. Mazar with a copy of the "Spill Act" and spill notification numbers.

At 1114 hours the writer secured the site.

KJD:dg



**MEMO**

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

TO Spill File Prosecution

FROM Karl J. Delancy

DATE September 21, 1982

SUBJECT DWM #82-08-25-003

CONCLUSIONS:

As a result of an aboveground storage tank failure at the incident site, on August 25, 1982, an estimated 1100 gallons of Potassium Hydroxide fluid were released to the soil, drainage ditches, and ponds on site. Insufficient containment was in place to prevent this Hazardous Substance from entering the Waters of the State.

Company personnel were allegedly not aware of N.J. State "Spill Act" reporting procedures and reporting was effected by the local fire department.

Upon reinspection approximately two weeks following the discharge, spilled material remained on the ground and in on-site containments.

RECOMMENDATIONS:

That a Notice of Violation be issued.

KJD:dg

DHM Case Name: MET-METALLURGICAL

DHM Case No.: 82-08-25-003

Date: 9/28/82

This form is an abbreviated version of the DHM Penalty Settlement Worksheet and should be attached to the office copy of the spill file for each case.  
Refer to the complete version of the worksheet for instructions.

### 1. Having a Spill

#### Size of Spill (Gallons)

1-1,000	\$ 200.00	
1,001-2,500	500.00	
2,501-5,000	700.00	
5,001-7,500	1,000.00	
7,501-10,000	1,500.00	
10,001-12,500	2,000.00	
12,501-15,000	1,000.00	
15,001-25,000	6,000.00	
25,001-50,000	8,000.00	
50,001 and over	10,000.00	
		\$ <u>500</u>
		x <u>1</u>
		Subtotal <u>500</u>

### 2. Amount of Substance Actually Reaching Waters of the State

0-5,000	1.0	
5,001-10,000	1.5	
10,001-50,000	1.75	
50,001 and over	2.0	
		\$ <u>500</u>
		x <u>1</u>
		Subtotal <u>500</u>

### 3. Spiller Classification

Individual Foreowner of Small Bus.	0.5	
Non-Hazardous Material Handler	1.0	
Hazardous Material Handler	1.5	
		\$ <u>500</u>
		x <u>1.5</u>
		Subtotal <u>750</u>

### 4. Spill History

Multiply by Number of Spill Events	82-8-25-3	
		\$ <u>750</u>
		x <u>1</u>
		Subtotal <u>750</u>

### 5. Responsibility for Spill

Accidental	1.0	
Negligent	1.25	
Gross Neg.	1.5	
Intentional	2.0	
		\$ <u>750</u>
		x <u>1</u>
		Subtotal <u>750</u>

### 6. Hazard of Discharge Material

No Discernible Effect on Water Quality	0.5	
Slight to Water Quality	1.0	
Moderate to Water Quality	1.5	
Great to Water Quality	2.0	
Extreme to Water Quality	3.0	
		\$ <u>750</u>
		x <u>1</u>
		Subtotal <u>750</u>

### 7. Cooperation

Open Bar to Clean Up Operations	3.0	
Non-Existant	2.5	
Extremely Poor	2.0	
Poor	1.5	
Fair	1.0	
Good	0.75	
Excellent	0.5	
Exemplary	.25	
		\$ <u>750</u>
		x <u>3.75</u>
		Subtotal <u>2812.50</u>

### 8. Non-Notification

Individual Foreowner or Small Business	1st	2nd	3rd	4th
minor	0	50	1000	
medium	50	100	2000	tax
major	100	200	6000	
Non-Hazardous Mat.				
minor	200	400	1500	
medium	400	800	6000	tax
major	700	1500	12000	
Hazardous Mat. Handler				
minor	500	1000	2500	
medium	1000	1500	15000	tax
major	2500	5000	25000	
				\$ <u>375</u>
				+ <u>500</u>
				Subtotal <u>875</u>

### 9. Pollution of Potable Waters

Hazardous Mat. Handler	Notified	Not Notified
minor	250	500
medium	500	750
major	750	1500
All Others		
minor	50	100
medium	100	300
major	250	1000
		\$ <u>0</u>
		+ <u>0</u>
		Additional Fine Modification (See Attached Explanation)
		Total <u>875</u>

Investigator: KE DELANE

58:10-23.11 (c) &amp; (e)

REFERENCE NO. 6

# HOME-MASTED FACILITY LISTING

MTZ METALLURGICAL CORPORATION

12000 30 CLINTON AVE  
30 PLAINFIELD  
NJ 07060  
201/341-1100

EXISTENCE DATE: 7/1/55

LATITUDE: 40.35N

DISTRICT: BASIN:

OWNER TYPE: P FACILITY TYPE:

COUNTY: MIDDLESEX  
FACILITY STATUS: 1

VERIFY/CONSTRUCT:

OWNER ADDRESS:

MTZ METALLURGICAL CORPORATION  
12000 30 CLINTON AVE.  
30 PLAINFIELD  
NJ 07060  
201/341-1100

OPERATOR:  
MTZ METALCO  
12000 30 CLINTON AVE  
30 PLAINFIELD  
NJ 07060  
201/341-1100

MAINTAINED BY:  
PETER BECKER EXC. VICE PRES.  
30 PLAINFIELD

## PERMIT DATA

PERMIT STATUS: 1

NOTIFICATION RECEIVED: 8/18/80

NOTIFICATION ACKNOWLEDGED: 10/09/80

PART A RECEIVED: 11/19/80

(1) PART A ACKNOWLEDGED: 5/17/82

(2) PART A ACKNOWLEDGED:

TYPE NUMBER

Y 115000

CONFIDENTIALITY NOTICE :  
CONFIDENTIALITY PART A :

MAINTENANCE RECORDS IND :

DRAWING STATUS IND :

PHOTO STATUS IND :

INDIAN LAND IND :

OWNER/OPERATOR IND :

SIC CODES:

3341

3350

## TRANSPORTATION

## WASTE DESCRIPTION

MT PROCESSES:  
MT PROCESSES:  
MT PROCESSES: 101

104

PAGE 601

LAST UPDATE: 5/17/82

CLOSURE DATE:

LONGITUDE: 0742545.0

TSDF

ADDRESS  
GICAL CORPORATION  
ON AVE.

NJ 07080

-1100

DESIGN CAPACITY

PROCESS	AMOUNT	UNIT
---------	--------	------

T03	22.000	E
-----	--------	---

T04	40000.000	U
-----	-----------	---

T01	2400.000	U
-----	----------	---

S01	10.000	G
-----	--------	---

157 820310  
451 820205

REFERENCE NO. 7



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WASTE MANAGEMENT

32 E. Hanover St., CN 027, Trenton, N.J. 08625

JACK STANTON  
DIRECTOR

LINO F. PEREIRA  
DEPUTY DIRECTOR

Metz Metallurgical Corporation  
Peter Becker, Executive  
3900 South Clinton Avenue  
South Plainfield, NJ 07080

RE: NOTICE OF VIOLATION  
FAILURE TO SUBMIT ANNUAL REPORT

Dear Mr. Becker:

As a result of the information included in your company's RCRA Part A submittal to the USEPA, Region II, your hazardous waste activities were classified as a TSD (Treatment, Storage or Disposal) facility status. Pursuant to the provisions of the New Jersey Solid Waste Management Act, N.J.S.A. 13:1E-1, et seq., the Department of Environmental Protection has determined by examination of our files that you failed to submit a TSD Facility Annual Report by March 1, 1982. The requirements of this report are given on the enclosed sheet (along with instructions on how to be delisted from TSD status). Please note that this report is different and separate from the Generator's Report referred to in N.J.A.C. 7:26-7.4(g).

NOW, THEREFORE, YOU ARE HEREBY NOTIFIED that your facility shall submit the required annual report within fifteen (15) days of receipt of this Notice to: Frank Coolick, Chief, Bureau of Hazardous Waste Engineering, 32 East Hanover Street, Trenton, New Jersey 08625.

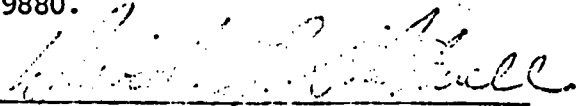
BE ON NOTICE that the Solid Waste Management Act establishes penalties of up to \$25,000 per day for violation of the Department's hazardous waste management regulations. Your failure to correct the above violation, or any future violation, may result in a penalty action by this Department. Failure to submit the required report by the specified date will result in daily fines as follows:

- i. During the first week after the deadline: \$100/day
- ii. During the second week after the deadline: \$200/day
- iii. During the third week after the deadline: \$500/day
- iv. During the fourth week after the deadline  
and subsequently: a maximum of \$25,000/day

If you have any questions regarding this Notice, please call the Bureau of Hazardous Waste Engineering at (609) 292-9880.

DATE: \_\_\_\_\_

MAR 17 1983

  
David J. Shotwell, Chief  
Bureau of Compliance and Enforcement

DJS:rh  
Enclosure

New Jersey Is An Equal Opportunity Employer

REFERENCE NO. 8



# Metz Metallurgical Corporation



3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N. J. 07080 /.(201) 561-1100

January 11, 1983

Mr. Bill Sharples  
State of New Jersey  
Department of Environmental Protection  
Division of Waste Management  
32 E. Hanover St., CN 027  
Trenton, NJ 08625

Dear Mr. Sharples:

This letter is in response to your notice dated January 7, 1983, stating that Metz Metallurgical Corporation is in violation of N.J.S.A. 13:1E-1 et seq, for failing to file a 1982 T-S-D, (treatment, storage, disposal) facility annual report.

Metz Metallurgical asked the United States Environmental Protection Agency to be reclassified from a hazardous waste T-S-D facility to a generator. Please see attached letter for details.

On January 10, 1983 Metz Metallurgical telephoned Mr. Tom Taccone of the United States Environmental Protection Agency and asked if our reclassification had been made. Mr. Taccone said that we were presently classified as a generator. Furthermore, Metz Metallurgical filed a hazardous waste generator report on February 19, 1982.

If we can, in any way, help you in clearing up this matter, please feel free to call us at 201-561-1100.

Sincerely,

METZ METALLURGICAL CORPORATION

*Carmin D Meglio*

Carmin D Meglio  
Process Engineer

CM:nct

Enclosure

cc: Mr. Tom Taccone

*Called Tom T. 8/5/83 to confirm.  
SB*

REFERENCE NO. 9

RCRA INSPECTION FORM

12-22-04

Report Prepared for:

Generator ☐

Transporter ☐

HWM (TSD) facility ☒

Copy of report sent to the facility ☐

Facility Information

Name: METZ Metallurgical Corp

Address: 3900 So. CLINTON Ave  
So. Plainfield

County: Middlesex

EPA ID#: NJ D002195303

Date of Inspection: 2/16/83

Phone : (201) 561 1100

Participating Personnel

State or EPA Personnel: Mike NALBONE  
N.J.D.E.P

Facility Personnel: Noel Marer Plant Engineer  
CARMINE Dimiglio

Report Prepared by Name: Mike Nalbhone

Agency: NJ DEP

Telephone #: (609) 292-9592

Approved for the Director by: \_\_\_\_\_

1/4 2-22-83

Describe the activities that result in the generation of hazardous waste.

- WASTE oil generated from milling operations & Lubrication processes.
- Freon TF still bottom waste is generated from degreasing operations.
- 

Identify the hazardous waste located on site, and estimate the approximate quantities of each. (Identify Waste Codes)

Checking the companies application the waste codes were noted or used on their manifests:

D001 - solvent waste from degreasers

U154 - methanol waste generated from cleaning/stripping metal

U239 - xylene waste which is no longer used or generated

U133 - Hydrogene waste - This waste is consumed in Reaction

U122 - Formaldehyde waste - This waste is consumed in Reaction

P104 - silver cyanide - collected and sold in pure form

U123 - Formic Acid - This waste is consumed in Reaction

F001 - Fluorocarbons

Is there reason to believe that the facility has hazardous waste on-site?

yes

- a. If yes, what leads you to believe it is hazardous waste?  
Check appropriate boxes:

☒ Company admits that its waste is hazardous during the inspection.

yes

☒ Company admitted the waste is hazardous in its RCRA notification and/or Part A Permit Application.

☒ The waste material is listed in the regulations as a hazardous waste from a nonspecific source (§261.31)

☐ The waste material is listed in the regulations as a hazardous waste from a specific source (§261.32)

☐ The material or product is listed in the regulations as a discarded commercial chemical product (§261.33)

☒ Testing has shown characteristics of ignitability, corrosivity, reactivity or extraction procedure toxicity, or has revealed hazardous constituents (please attach analysis report)

☐ Company is unsure but there is reason to believe that waste materials are hazardous. (Explain)

GENERATOR INSPECTION CHECKLIST

40 CFR 262 Subpart A-General

262.11 - Hazardous waste determination

YES NO N/A

1) Did the generator test its waste to determine whether it is hazardous?

Is the waste hazardous?

2) Is the generator determining that its waste exhibits a hazardous waste characteristic(s) based on its knowledge of the material(s) or processes used?

40 CFR 262 Subpart B-The Manifest

Has hazardous waste been shipped off-site since November 19, 1980?

If yes, approximately how many shipments, off-sites, have been made and describe the approximate size of an average shipment made on a monthly basis. If facility is a small quantity generator, please explain.

see attached manifests

Four shipmen

262.21 Does each manifest (or representative sample) have the following information? Please circle the missing elements.

- a manifest document number?

- the generators name, mailing address, telephone number and EPA I.D. Number?

- the transporters name and EPA I.D. Number?

- the name, address and EPA ID Number of the designated facility?

- a description of the wastes (DOT)?

- the total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle?

- a certification that the materials are properly classified, described, package, marked and labeled, and are in proper condition for transportation under regulations of the DOT and EPA?

(obtain a copy of the incomplete manifests)

40 CFR 262 - Subpart D - Recordkeeping and Reporting

262.40 Has the generator maintained facility records since Nov. 19, 1980? (manifest, exception report and waste analysis)

262.42 Has the generator received signed copies (from the TSD facility) of all the manifests for waste shipped off-site more than 35 days ago?

If not, have Exception Reports been submitted to EPA covering any of these shipments made more than 45 days ago?

YES NO N/A

40 CFR 262 - Subpart C - Pretransportation Requirements

262.30-33 Before transporting or offering hazardous waste for transportation off-site does the generator:

- 1) Package the waste in accordance with applicable DOT regulations (i.e., 49 CFR Parts 173, 178 & 179) X \_ \_
- 2) Label each package according to DOT (i.e., 49 CFR 172) X \_ \_
- 3) Mark each package according to DOT (i.e., 49 CFR 172) X \_ \_
- 4) Mark each container of 110 gallons or less with the words "Hazardous Waste - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. EPA." and include the generators name, address and manifest document number. (i.e., 49 CFR 172.304) X \_ \_

262.34 Accumulation Time

1) How is waste accumulated on-site?

☒ Containers

☐ Tanks

☐ Surface impoundments (complete BWP checklist)

☐ Piles (complete BWP checklist)

2) Is waste accumulated for more than 90 days? \_ X \_

If yes, complete BWP checklist

3) Is each container clearly dated with each period of accumulation so as to be visible for inspection? X \_ \_

4) Is each container or tank marked or labeled with the words "hazardous waste" or in compliance with the DOT labeling requirements? X \_ \_

STOP HERE IF THE HAZARDOUS WASTE MGT FACILITY (TSD) CHECKLIST IS FILLED OUT

262.34 - SHORT TERM ACCUMULATION STANDARDS

(For generators who accumulate waste in tanks or containers for 90 days or less)

40 CFR 265 - Subpart I Containers

YES NO N/A

265.170 - What type of containers are used for storage. Describe the size, type and quantity and nature of waste (e.g., 12 fifty-five gallon drums of waste acetone).

55 gallon steel drums

265.171 - Do the containers appear to be in good condition, not in danger of leaking?

If not, please describe the type, condition and number of leaking or corroded containers. Be detailed and specific.

X \_ \_

265.172 - Are hazardous waste stored in containers made of compatible materials?

If not, please explain.

X \_ \_

265.173(a) - Are all containers closed except those in use?

X \_ \_

265.173(b) - Do containers appear to be properly opened, handled or stored in a manner which will minimize the risk of the container rupturing or leaking?

X \_ \_

265.174 - Is the storage area inspected at least weekly?

X \_ \_

265.176 - Are containers holding ignitable and reactive waste located at least 50 feet (15 meters) away from the facility's property line?

X \_ \_

265.177 - Are incompatible waste stored separate from each other?

X \_ \_



YES NO N/A

40 CFR 265 Subpart J - Tanks

265.190 1) What are the approximate number and size of tanks containing hazardous waste?

2) Identify the waste treated/stored in each tank.

265.192 - General Operating Requirements

1) Are the tanks maintained so that there is no evidence of past, present, or risk of future leaks?

If no, please explain.

2) Are there leaking tanks?

3) Are all hazardous wastes or treatment reagents being placed in tanks compatible with the tank material so that there is no danger of ruptures, corrosion, leaks or other failures?

4) Do uncovered tanks have at least 2 feet of freeboard or an adequate containment structure?

5) If waste is continuously fed into a tank, is the tank equipped with a means to stop the inflow from the tank? e.g. bypass system to a standby tank

265.194 - Inspections

1) Is the tank(s) inspected each operating day for  
a) discharge control equipment  
b) monitoring equipment  
c) level of waste in tank

2) Are the tanks and surrounding areas (e.g., dike) inspected weekly for leaks, corrosion or other failures?

3) Are there underground tanks?

If yes, how many and can they be entered for inspection?

265.198 - Are ignitable or reactive wastes stored in a manner which protects them from a source of ignition or reaction?

If no, please explain.

265.199 - Does it appear that incompatible wastes are being stored separate from each other?

YES NO N/A

265.16 - Personnel Training

- 1) Have facility personnel successfully completed a program of classroom instruction or on-the-job training within 6 months of having been employed? — X —
- If yes, have facility personnel taken part in an annual review of training? — — —

- 2) Is there written documentation of the following:

- job title for each position at the facility related to hazardous waste management and the name of the employee filling each job? — — —
- type and amount of training to be given to personnel in jobs related to hazardous waste management? — — —
- actual training or experience received by personnel? — — —

- 3) Are training records kept on all employees for at least 3 years? — — —

40 CFR 265 - Subpart C - Preparedness and Prevention

- 265.32 Does the facility comply with preparedness and prevention requirements including maintaining:

- an internal communications or alarm system? X — —
- a telephone or other device to summon emergency assistance from local authorities? X — —
- portable fire equipment? X — —
- water at adequate volume and pressure to supply water hose streams, foam producing equipment, etc. X — —

- 265.33 Is equipment tested and maintained? X — —

- 265.34 Is there immediate access to communications or alarm systems during handling of hazardous waste? X — —

- 265.35 Adequate aisle space? X — —

If no, please explain storage pattern.

In your opinion, do the types of waste on-site require all of the above procedures, or are some not needed: Explain. — — —

40 CFR 265 - Subpart D - Contingency Plan and Emergency Procedures

Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosions or any unplanned release of hazardous waste? — X —

- 1) Does the plan describe arrangements made with the local authorities? — — —
- 2) Has the contingency plan been submitted to the local authorities? — — —
- 3) Does the plan list names, addresses and phone numbers of Emergency Coordinators? — — —
- Does the plan have a list of what emergency equipment is available? — — —
- 5) Is there a provision for evacuating facility personnel? — — —
- 6) Was there an emergency coordinator present or on call at the time of the inspection? — — —

Company will submit copy of format to office to confirm Requirements are met

Company will submit plan to office to confirm Requirements are met.

# Transporter Inspection Report Form

## 40 CFR Part 263 Transporter Standards

	YES	NO	N/A
263.10 - Does the transporter carry hazardous waste?	_____	_____	_____
263.12 - Does the transporter store hazardous waste at a transfer facility - if yes, how long?			
_____ 10 days or less	_____	_____	_____
_____ more than 10 days (complete TSD form)			
263.20 - <u>Manifest System</u>			
1) Does the transporter have a copy for each manifest shipment of hazardous waste?	_____	_____	_____
2) Does a representative portion of the manifests show the following information (if no, circle the missing information)	_____	_____	_____
o Generator's name, address, telephone and EPA I.D. numbers, signature and date of signature	_____	_____	_____
o Transporter's name, EPA I.D. number, signature and date of signature	_____	_____	_____
o TSD's name, address and EPA I.D. Number	_____	_____	_____
and either the signature and date of the TSD or the name, EPA I.D., signature and date of the next transporter.	_____	_____	_____
o Manifest Document number	_____	_____	_____
o Proper DOT shipping description	_____	_____	_____
o Quantity & type of containers	_____	_____	_____
(If no, to any of the above obtain copies of incomplete manifests).			
3) Based on available information, do all manifests conform to the hazardous waste shipments made? If no, explain	_____	_____	_____
262.22 - Have records been kept since November 19, 1980?	_____	_____	_____
263.30 - Has there ever been a spill or discharge of hazardous waste during transportation?	_____	_____	_____
If yes, was the incident report submitted to DOT? (obtain copy of the report)	_____	_____	_____
263.31 - If there was any spill or discharge of hazardous waste, was it cleaned up? If no, explain.	_____	_____	_____

General Comments:

HAZARDOUS WASTE MANAGEMENT FACILITY CHECK LIST  
(Facilities Subject to 40 CFR 265 Standards)

YES   NO   N/A

40 CFR Part 265 Subpart B General Facility Standards

265.13-General Waste Analysis

- 1) Is there a detailed chemical and physical analysis of a representative sample of the waste or each waste?  
(At a minimum this analysis must contain all the information necessary for proper management of the waste)
- 2) Does the character of the waste handled at the facility change from day to day, week to week, etc., thus requiring frequent testing?  
You may check only one

Waste characteristics vary \_\_\_\_\_  
All waste are basically the same \_\_\_\_\_  
Company treats all waste as hazardous \_\_\_\_\_

- 3) Is there a written waste analysis plan at the facility?

Does it contain the following:

- a) Parameters for each waste to be analyzed and the rationale for the selection of these parameters.
- b) Test methods used to test these parameters.
- c) Sampling methods to obtain a representative sample of the waste to be analyzed.
- d) Frequency of repeated analysis to ensure accurate and current information.
- 4) Does hazardous waste come to this facility from an outside source? e.g. another generator.
- 5) If waste comes from an outside source, are there procedures in the plan to insure that waste received conforms to the accompanying manifest?

265.14-Security

- 1) Is there: a) a 24-hour surveillance system? or,  
b) a suitable barrier which completely surrounds the active portion of this facility?

- 2) Are there "Danger-Unauthorized Personnel Keep Out" signs posted at each entrance to the facility?

If no, explain what measures are taken for security.

265.15 - General Inspections Requirements

- 1) Does the facility have a written inspection schedule?
- 2) Does the schedule identify the types of problems to be looked for and the frequency of inspections?
- 3) Does the owner/operator record inspections in a log?
- 4) Is there evidence that problems reported in the inspection log have been remedied?

If no, please explain.

265.16 - Personnel Training

YES NO N/A

- 1) Have facility personnel successfully completed a program of classroom instruction or on-the-job training within 6 months of having been employed?

\_\_\_ \_\_\_ \_\_\_

If yes, have facility personnel taken part in an annual review of training?

\_\_\_ \_\_\_ \_\_\_

- 2) Is there written documentation of the following:

—job title for each position at the facility related to hazardous waste management and the name of the employee filling each job?

\_\_\_ \_\_\_ \_\_\_

—type and amount of training to be given to personnel in jobs related to hazardous waste management?

\_\_\_ \_\_\_ \_\_\_

—actual training or experience received by personnel?

\_\_\_ \_\_\_ \_\_\_

- 3) Are training records kept on all employees for at least 3 years?

\_\_\_ \_\_\_ \_\_\_

265.17-General Requirements for Ignitable, Reactive or Incompatible Wastes

- 1) Are there ignitable, reactive or incompatible waste on site?

\_\_\_ \_\_\_ \_\_\_

If yes, what are the approximate types and quantities and location of the waste.

- 2) Have precautions been taken to prevent accidental ignition or reaction of ignitable or reactive waste?

\_\_\_ \_\_\_ \_\_\_

If no, please explain.

- 3) In your opinion, are proper precautions taken so that these wastes do not:

—generate extreme heat or pressure, fire or explosion, or violent reaction?

\_\_\_ \_\_\_ \_\_\_

—produce uncontrolled toxic mist, fumes, dusts or gases in sufficient quantities to pose a risk of fire or explosions?

\_\_\_ \_\_\_ \_\_\_

—damage the structural integrity of the device or facility containing the waste?

\_\_\_ \_\_\_ \_\_\_

—threaten human health or the environment?

\_\_\_ \_\_\_ \_\_\_

40 CFR 265 - Subpart C - Preparedness and Prevention

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
265.32 Does the facility comply with preparedness and prevention requirements including maintaining:			
-- an internal communications or alarm system?	—	—	—
-- a telephone or other device to summon emergency assistance from local authorities?	—	—	—
-- portable fire equipment?	—	—	—
-- water at adequate volume and pressure to supply water hose streams, foam producing equipment, etc.	—	—	—
265.33 Is equipment tested and maintained?	—	—	—
265.34 Is there immediate access to communications or alarm systems during handling of hazardous waste?	—	—	—
265.35 Adequate aisle space?	—	—	—
If no, please explain storage pattern.			
In your opinion, do the types of waste on-site require all of the above procedures, or are some not needed: Explain.	—	—	—

40 CFR 265 - Subpart D - Contingency Plan and Emergency Procedures

Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosions or any unplanned release of hazardous waste?

1) Does the plan describe arrangements made with the local authorities?	—	—	—
2) Has the contingency plan been submitted to the local authorities?	—	—	—
3) Does the plan list names, addresses and phone numbers of Emergency Coordinators?	—	—	—
4) Does the plan have a list of what emergency equipment is available?	—	—	—
5) Is there a provision for evacuating facility personnel?	—	—	—
6) Was there an emergency coordinator present or on call at the time of the inspection?	—	—	—

40 CFR 265 Subpart E-Manifest System, Recordkeeping and Reporting

265.71 - Use of the Manifest

1) Has the facility received hazardous waste from an <u>off-site source</u> since November 19, 1980?	—	—	—
If no, skip to 265.73 - Operating Record			
2) <u>If yes</u> , does it appear that the facility has a copy of a manifest for each hazardous waste load received?	—	—	—
If not, please explain.			

YES NO N/A

3) How many post-November 19 manifests does the facility have?  
(Estimate if the number is large)

4) Does each manifest have the following information?  
(circle missing information)

— a manifest document number?

— the generators name, mailing address, telephone number and  
EPA I.D. #?

— the transporters name and EPA I.D. Number?

— the TSD name, address, telephone number & EPA I.D. Number?

— a description of the waste (DOT)?

— the total quantity of each hazardous waste by units of weight  
or volume, and the type and number of containers as loaded;  
into or onto the transport vehicle?

— a certification that the materials are properly classified,  
described, packaged, marked and labeled, and are in proper  
condition for transportation under regulations of the DOT  
and EPA?

(Obtain a copy of the incomplete manifests)

#### 265.72 - Manifest Discrepancies

Have there been significant discrepancies between the quantity  
and type of waste received and the waste identified on the  
manifest?

Describe unreconciled discrepancies.

#### 265.73 - Operating Record

1) Does the facility keep an operating record?

2) Does the record contain the following information:

a) Description and quantity of waste on-site and the method(s)  
and date(s) of its Treatments, Storage & Disposal?

b) The location and quantity of each hazardous waste at  
each location?

c) Records and results of waste analysis and trial tests  
performed and identified in the waste analysis plan?

d) Summary reports and details of all incidents that require  
implementing the contingency plan.

e) Records and results of inspections for the past 3 years  
or November 19, 1980 which ever is less?

f) Monitoring, testing or analytical data where required for:

Groundwater, Land Treatment, Incinerators, and  
Thermal Treatment?

#### 265.76 - Unmanifested Waste Report

Has the facility accepted hazardous waste from off-site  
sources without a manifest?

If yes, has the facility submitted an unmanifested waste  
report?

40 CFR 265 Subpart F - Groundwater Monitoring

YES NO N/A

(Applies only to surface impoundments, landfills and/or land treatment facilities.)

Is a groundwater monitoring plan available at the facility?

\_\_\_

If yes, please fill out the appropriate Groundwater Monitoring Questionnaire and attach to this report.

40 CFR 265 Subpart G - Closure and Post-Closure

265.111 Closure Performance Standard

Have any portions of the facility been closed since November 19, 1980?

If yes, please explain

\_\_\_

265.112 - Closure Plan

Does the facility have a written closure plan?  
(Applies to all types of TSD facilities)

\_\_\_

If yes, does the written plan include:

1. A description of how and when the facility will be partially (if applicable) and ultimately closed?
2. An estimate of the maximum inventory of wastes in storage or treatment at any time during the life of the facility?
3. A description of the steps necessary to decontaminate facility equipment during closure?
4. A schedule for final closure including the anticipated date when waste will no longer be received and when final closure will be completed?
5. Does the owner/operator have a written estimate of the cost of closing the facility?

\_\_\_

\_\_\_

\_\_\_

\_\_\_

\_\_\_

If yes, what is it? (\$)

265.118 - Post Closure Plan

Does the facility have a written post-closure plan?  
(Applies only to disposal facilities)

\_\_\_

If yes, Does the Plan:

1. Identify the activities which will be carried on after closure and the frequency of these activities?
2. Include a description of planned groundwater monitoring activities and their frequency during post-closure?
3. Include a description of planned maintenance activities and frequency to insure integrity of final cover during post-closure?
4. Include the name, address and phone number of a person or office to contact during post-closure?
5. Does the owner/operator have a written estimate of the cost of post-closure for the facility?

\_\_\_

\_\_\_

\_\_\_

\_\_\_

\_\_\_

If yes, what is it? (\$)



Please circle all appropriate activities and answer questions on indicated pages for all activities circled.

<u>Storage</u>	<u>Treatment</u>	<u>Disposal</u>
Container - pg 6	Tank - pg 7	Landfill - pg 11
Tank, above ground-pg 7	Surface Impoundment-pg 8	Land Treatment - pg 10
Tank, below ground-pg 7	Incineration - pg 12	Surface Impoundments - pg 8
Surface Impoundments-pg 8	Thermal Treatment- pg 12	Other _____
Waste Piles - pg 9	Land Treatment - pg 10	
Other _____	Chemical, Physical and Biological Treatment - pg 13	
	Other _____	

YES NO N/A

40 CFR 265 - Subpart I - Containers

- 1) - What type of containers are used for storage.  
Describe the size, type, quantity and nature of waste  
(e.g. 12 fifty-five gallon drums of waste acetone)
  
- 2) - Is there a containment system for spills, leaks and  
precipitation?  
If yes, describe. \_\_\_\_\_
  
- 265.171 - Do the containers appear to be in good condition, not in  
danger of leaking?  
If not, please describe the type, condition and number of  
leaking or corroded containers. Be detailed and specific. \_\_\_\_\_
  
- 265.172 - Are hazardous waste stored in containers made of compatible  
materials?  
If not, please explain. \_\_\_\_\_
  
- 265.173(a) - Are all containers closed except those in use? \_\_\_\_\_
- 265.173(b) - Do containers appear to be properly opened, handled  
or stored in a manner which will minimize the risk  
of the container rupturing or leaking? \_\_\_\_\_
- 265.174 - Is the storage area inspected at least weekly? \_\_\_\_\_
- 265.176 - Are containers holding ignitable and reactive waste located  
at least 50 feet (15 meters) away from the facility's  
property line? \_\_\_\_\_
- 265.177 - Are incompatible wastes stored separate from each  
other?  
If no, explain \_\_\_\_\_

40 CFR 265 Subpart J - Tanks

YES NO N/A

265.190 1) What are the approximate number and size of tanks containing hazardous waste?

\_\_\_\_

2) Identify the waste treated/stored in each tank.

265.192 - General Operating Requirements

1) Are the tanks maintained so that there is no evidence of past, present, or risk of future leaks?

\_\_\_\_

If no, please explain.

2) Are there leaking tanks?

\_\_\_\_

3) Are all hazardous wastes or treatment reagents being placed in tanks compatible with the tank material so that there is no danger of ruptures, corrosion, leaks or other failures?

\_\_\_\_

4) Do uncovered tanks have at least 2 feet of freeboard or an adequate containment structure?

\_\_\_\_

5) If waste is continuously fed into a tank, is the tank equipped with a means to stop the inflow from the tank? e.g. bypass system to a standby tank

\_\_\_\_

265.194 - Inspections

1) Is the tank(s) inspected each operating day for  
a) discharge control equipment  
b) monitoring equipment  
c) level of waste in tank

\_\_\_\_  
\_\_\_\_  
\_\_\_\_

2) Are the tanks and surrounding areas (e.g., dikes) inspected weekly for leaks, corrosion or other failures?

\_\_\_\_

3) Are there underground tanks?

\_\_\_\_

If yes, how many and can they be entered for inspection?

\_\_\_\_

265.198 - Are ignitable or reactive wastes stored in a manner which protects them from a source of ignition or reaction?

\_\_\_\_

If no, please explain.

265.199 - Does it appear that incompatible wastes are being stored separate from each other?

\_\_\_\_

40 CFR 265 Subpart K - Surface Impoundments

YES NO N/A

Describe the design and operating features of the surface impoundment to prevent ground water contamination (e.g., liner leachate collection system).

265.220 - Give the approximate size of surface impoundments (gallons or cubic feet). Please specify the types of wastes stored and treated.

265.222 - Is there at least 2 feet of freeboard in the impoundment? \_\_\_\_\_

265.223 - Do all earthen dikes have a protective cover to preserve their structural integrity? \_\_\_\_\_

If yes, please specify the type of covering.

265.226 - 1) Is the free board level inspected daily? \_\_\_\_\_

2) Are the dikes surrounding the surface impoundment inspected for leaks, deterioration or failures inspected weekly? \_\_\_\_\_

265.229 - 1) Are any ignitable or reactive wastes placed in the impoundment? \_\_\_\_\_

2) If yes, is the waste treated immediately after placement in the impoundment to render the waste non-active and/or non-ignitable? \_\_\_\_\_

3) If no, to (2) explain. \_\_\_\_\_

265.230 - Are incompatible wastes placed in the impoundment? \_\_\_\_\_

If yes, explain. \_\_\_\_\_

40 CFR 265 Subpart L - Waste Piles

YES NO N/A

265.250 - How many waste piles are on-site and approximately how large are they? (Please indicate size and height and types of wastes in piles.)

265.251 - Is the waste pile protected from wind erosion?

a) Does it appear to need such protection?

b) Explain what type of protection does exist.

265.253 Containment

1) Is leachate run-off from the waste piles a hazardous waste? If no, skip down to 265.256.

2) Is the pile placed on an impermeable base?

3) Is run-on diverted away from the pile?

4) Is the leachate and run-off collected and treated?

If no to any of the above questions above then:

5) Is the pile protected from precipitation and run-on?

6) Are wastes containing free liquids placed in the pile?

265.256 - 1) Are ignitable or reactive wastes placed on the pile?  
If no, skip to §265.257

2) Is the ignitable or reactive waste added to existing pile resulting in it no longer meeting the definition of ignitable and reactive?  
If no, explain.

3) Is the waste protected from any materials or condition that may cause it to ignite or react?  
If no, explain.

265.257 - Does it appear that a pile of incompatible wastes is being stored separate from other wastes or materials, or protected from them by means of a dike, berm, wall or other device? If no, explain.

40 CFR 265 Subpart M - Land Treatment

265.270 - Identify the types of waste and the size of the land treatment area?

265.272 - General Operating Requirements

YES   NO   N/A

- 1) Can the facility operator demonstrate that the hazardous waste has been made less or non-hazardous by biological degradation or chemical reactions occurring in or on the soil?

\_\_\_ \_\_\_ \_\_\_

Please explain how.

- 2) Is run-on diverted from the active portions of the land treatment facility?

\_\_\_ \_\_\_ \_\_\_

- 3) Is run-off from the active portions of the facility collected?

\_\_\_ \_\_\_ \_\_\_

If yes, is the run-off a hazardous waste?

\_\_\_ \_\_\_ \_\_\_

265.276 - Food Chain Crops

- 1) Are food chain crops being grown on the facility property?

If yes, can the facility operator document that arsenic lead and mercury:

\_\_\_ \_\_\_ \_\_\_

- will not be transferred to the crop or ingested by food-chain animals or

\_\_\_ \_\_\_ \_\_\_

- will not occur in greater concentrations in the crops grown on the land treatment facility than in the same crops grown on the untreated soils.

\_\_\_ \_\_\_ \_\_\_

- 2) Has notification of the growing of food chain crops been made to the Regional Administrator?

\_\_\_ \_\_\_ \_\_\_

265.278 - Is there a written and implemented plan for unsaturated zone monitoring?

\_\_\_ \_\_\_ \_\_\_

Make copy for office review.

265.279 - Are there records of the application dates, application rates, quantities and location of each hazardous waste placed at the facility?

\_\_\_ \_\_\_ \_\_\_

265.281 - Is ignitable or reactive waste immediately incorporated into the soil so that the resulting waste no longer meets that definition?

\_\_\_ \_\_\_ \_\_\_

If not, please explain.

265.282 - Are incompatible waste placed in separate land treatment areas?

\_\_\_ \_\_\_ \_\_\_

If no, please explain.

40 CFR 265 Subpart N - Landfills

YES NO N/A

265.300 - Identify the types of waste and size of the landfill.

265.302 - General Operating Requirements

- 1) Is run-on diverted away from the active portions of the landfill? \_ \_ \_
  - 2) Is run-off from active portions of the landfill collected? \_ \_ \_
  - 3) Is waste which is subject to wind dispersal controlled? \_ \_ \_
- Please explain how.

265.309 - Does the owner/operator maintain a map with:

- 1) The exact location and dimensions of each cell? \_ \_ \_
- 2) The contents of each cell and approximate location of each hazardous waste type? \_ \_ \_

265.312 - Is ignitable or reactive waste treated so that it is not ignitable or reactive before being placed in the landfill?

Explain how you know. \_ \_ \_

265.313 - Are precautions taken to ensure that incompatible waste are not placed in the same landfill cell?

If no, please explain. \_ \_ \_

265.314 Special Requirements for Liquid Waste

- 1) Are bulk or non-containerized wastes containing free liquids placed in the landfill? \_ \_ \_

If yes,

- a) Does the landfill have a liner which is chemically and physically resistant to the added liquid? or \_ \_ \_
- b) Is the waste treated and stabilized so that free liquids are no longer present? \_ \_ \_

- 2) Are containers holding liquid waste or waste containing free liquids placed in the landfill? \_ \_ \_

Please describe the types and contents of such containers placed in the landfill.

265.315 - Are empty containers placed in the landfill crushed flat, shredded or similarly reduced in volume before they are buried? \_ \_ \_

265.316 - Are small containers of hazardous waste in overpacked drums placed in the landfill? \_ \_ \_

If yes, please describe precautions taken to prevent the release of the waste.

1) What type of incinerator or thermal treatment is at the site  
(e.g. waterwall incinerator, boiler, fluidized bed, etc.)

2) List the types and quantities of HW incinerated or thermally treated.

3) Is the residue from the incinerator thermal treatment unit a hazardous waste?

4) What types of air pollution control devices (if any) are installed in the incinerator/or thermal treatment unit?

5) Is energy recovered from the process?  
If yes, describe.

6) What is the destruction and removal efficiency for the organic hazardous waste constituents?

265.341 - Does the operating record include additional analysis  
and to determine types of pollutants which might be emitted including:  
265.375

- heating value of the waste?

- halogen and sulfur content?

- concentrations of lead and mercury?

If no to any of the above questions is there justification and documentation?

265.345 If operating, does it appear the incinerator/or thermal  
and treatment unit is operating at steady state for con-  
265.373 ditions of operation, including temperature and air flow?

265.347 - Monitoring and Inspection  
and

265.377 1) Are existing instruments relating to combustion and emission controls monitored every 15 minutes?

If no, explain

2) Does the incinerator/thermal treatment have all the following instruments for measuring: wastefeed, auxiliary fuel feed air flow, incinerator temperature scrubber flow, and scrubber pH? (Circle missing instruments)

If no, explain.

3) Is the stack plume observed visually at least hourly for opacity and color?

4) Are there any signs of leaks, spill and fugitive emissions associated with the pumps, valves, conveyors, pipes etc? If yes, describe.

5) Are all emergency shutdown controls and system alarms checked to assure proper operation?

6) Is there any reason to believe the incinerator is being operated improperly? i.e., steady state conditions are not maintained.  
If yes, explain.

7) Is the incinerator/thermal treatment inspected daily?

YES NO N/A

265.382 Is there open burning of hazardous waste? \_\_\_\_\_

- a) If yes, what is being burned? (Only burning or detonation of explosives is permitted)
- b) If open burning or detonation of explosives is taking place approximately what is the distance from the open burning or detonation to the property of others?

40 CFR 265 Subpart Q - Chemical, Physical and Biological Treatment  
(other than in tanks, surface impoundments or land treatment facilities)

- 1) Describe the treatment system at this facility and the types of wastes treated.

265.401 - Does the treatment process system show any signs of ruptures, leaks or corrosion? \_\_\_\_\_

If yes, describe.

265.401 - Is there a means to stop the inflow of continuously-fed hazardous wastes? \_\_\_\_\_

265.403 - Inspections

- 1) Is the discharge control safety equipment (e.g. waste feed cut-off systems, by-pass systems, drainage systems and pressure relief systems) in good working order? \_\_\_\_\_

Are they inspected at least once each operation day? \_\_\_\_\_

- 2) Does the data gathered from the monitoring equipment (e.g., pressure and temperature gauges) show treatment process is operating according to design? \_\_\_\_\_

Is data gathered at least once each operating day? \_\_\_\_\_

- 3) Are construction materials of the treatment process inspected at least weekly to detect corrosion or leaking of fixtures and seams? \_\_\_\_\_

- 4) Are the discharge confinement structures, (e.g. dikes) immediately surrounding the treatment unit inspected at least weekly to detect erosion or obvious signs of leakage (e.g. wet spots or dead vegetation)? \_\_\_\_\_

265.405 - Are ignitable or reactive waste fed into the waste treatment system treated or protected from any material or conditions which may cause it to ignite or react? \_\_\_\_\_

If yes, explain how.

265.406 - Are the incompatible wastes placed in the same treatment process? \_\_\_\_\_

If yes, please explain.



# Metz Metallurgical Corporation



3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N. J. 07080 / (201) 561-1100

January 11, 1983

Mr. Bill Sharples  
State of New Jersey  
Department of Environmental Protection  
Division of Waste Management  
32 E. Hanover St., CN 027  
Trenton, NJ 08625

Dear Mr. Sharples:

This letter is in response to your notice dated January 7, 1983, stating that Metz Metallurgical Corporation is in violation of N.J.S.A. 13:1E-1 et seq, for failing to file a 1982 T-S-D, (treatment, storage, disposal) facility annual report.

Metz Metallurgical asked the United States Environmental Protection Agency to be reclassified from a hazardous waste T-S-D facility to a generator. Please see attached letter for details.

On January 10, 1983 Metz Metallurgical telephoned Mr. Tom Taccone of the United States Environmental Protection Agency and asked if our reclassification had been made. Mr. Taccone said that we were presently classified as a generator. Furthermore, Metz Metallurgical filed a hazardous waste generator report on February 19, 1982.

If we can, in any way, help you in clearing up this matter, please feel free to call us at 201-561-1100.

Sincerely,

METZ METALLURGICAL CORPORATION

*[Signature]*  
Carmin DiMeglio  
Process Engineer

CM:nct

Enclosure

cc: Mr. Tom Taccone

2  
Metallurgical  
Corporation



3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N.J. 07080 / (201) 561-1100 / TWX: 710-997-9524

July 2, 1982

Dr. Richard Baker  
Chief of Permits Administration  
United States Environmental Protection Agency  
Region II  
26 Federal Plaza  
New York, NY 10278

Dear Dr. Baker:

As you are well aware, according to subtitle C of the Resource Conservation and Recovery Act (RCRA), Metz Metallurgical Corp. (EPA ID No. N.JD002195303) is required to fulfill its financial requirements as a Hazardous Waste Treatment-Storage-Disposal (T-S-D) facility by July 6, 1982. After much deliberation, Metz Metallurgical has determined that it is not a T-S-D facility and therefore asks to be reclassified as a generator.

Metz Metallurgical is a manufacturer of precious metals and as such; all our by-products are recyclable. We burn our by-products and our customers by-products in an incinerator; collect the ash and reprocess it, as described in the T-S-D Federal application.

Metz Metallurgical applied for a T-S-D facility status because we store chemical compounds listed in CFR - Title 40, Part 261.33. These chemical compounds are as follows: silver cyanide, formaldehyde, methanol, hydrazine hydrate and freon TF. The silver cyanide, formaldehyde and hydrazine hydrate are reagents and are consumed in our operations. Freon TF is used as a degreaser. The waste from freon TF is stored and transported off site to be distilled in accordance with The Hazardous Waste Manifest System. Methanol is used as a drying agent. The by-product methanol is burned for its heat content.

Metz Metallurgical Corporation is very willing to do whatever has to be done to abide by RCRA, and it would appreciate your help in amending our application to a generator status.

If you have any questions please do not hesitate to give us a call at 201-561-1100.

Sincerely,

METZ METALLURGICAL CORPORATION

*E. Peter Becker*  
E. Peter Becker  
Executive Vice President

EPB:kc

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
NOTIFICATION OF HAZARDOUS WASTE ACTIVITYForm Approved OMB No. 102  
GSA No. 0246 EPA-011

INSTRUCTIONS: If you receive a label, affix it in the space at left. If information on the label is incorrect, draw through it and supply the correct information in the appropriate section below. If the label is complete and correct, leave items I, II, and III below blank. If you did not receive a label, complete all items. "Installation" means a single site where hazardous waste is generated, treated, stored and/or disposed of, or a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. Information requested herein is required by Section 3010 of the Resource Conservation and Recovery Act.

INSTALLATION'S EPA I.D. NO.

NJ0002195303

NAME OF INSTALLATION

INSTALLATION MAILING ADDRESS

METZ METALLURGICAL CORPORATION  
3300 SOUTH CLINTON AVE  
S PLAINFIELD, NJ 07080

LOCATION OF INSTALLATION

3300 SOUTH CLINTON AVE  
S PLAINFIELD, NJ 07080

## FOR OFFICIAL USE ONLY

## COMMENTS

INSTALLATION'S EPA I.D. NUMBER

APPROVED

DATE RECEIVED  
(yr., mo., & day)

N.J. Dept. #15305

## I. NAME OF INSTALLATION

METZ METALLURGICAL CORPORATION

## II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX

33900 SOUTH CLINTON AVENUE

CITY OR TOWN

S PLAINFIELD

ST.

ZIP CODE

NJ 07080

## III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER

SAME

CITY OR TOWN

6

ST.

ZIP CODE

## IV. INSTALLATION CONTACT

NAME AND TITLE (last, first, &amp; job title)

E. PETER BECKER EXEC V. PRES.

PHONE NO. (area code &amp; no.)

201-561-1100

## V. OWNERSHIP

A. NAME OF INSTALLATION'S LEGAL OWNER

METZ METALLURGICAL CORP.

B. TYPE OF OWNERSHIP  
(enter the appropriate letter into box)F - FEDERAL  
M - NON-FEDERAL

M

## VI. TYPE OF HAZARDOUS WASTE ACTIVITY (enter "X" in the appropriate box(es))

☐ A. GENERATION☐ B. TRANSPORTATION (complete item VII)☒ C. TREAT/STORE/DISPOSE☐ D. UNDERGROUND INJECTION

## VII. MODE OF TRANSPORTATION (transporters only - enter "X" in the appropriate box(es))

☐ A. AIR☐ B. RAIL☐ C. HIGHWAY☐ D. WATER☐ E. OTHER (specify):

## VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your Installation's EPA I.D. Number in the space provided below.

☒ A. FIRST NOTIFICATION☐ B. SUBSEQUENT NOTIFICATION (complete item C)

C. INSTALLATION'S EPA I.D. NO.

NJ0002195303

## IX. DESCRIPTION OF HAZARDOUS WASTES

Please go to the reverse of this form and provide the requested information.

STATE OF NEW JERSEY  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
HAZARDOUS WASTE MANIFEST

PART A. GENERATOR'S COPY

DOCUMENT NO. NJ 0027957

GENERATOR NAME <b>METZ METALLURGICAL CORPORATION</b>		PHONE (INCLUDE AREA CODE) <b>201-561-1100</b>	EPA ID NO. <b>NJD000219530</b>
ADDRESS (STREET - CITY - STATE - ZIP CODE) <b>3900 SO. CLINTON AVE., SO. PLAINFIELD, NEW JERSEY 07080</b>			
TRANSPORTER NO. 1 <b>BARON BLAKESLEE/DIV. OF PUREX</b>		PHONE (INCLUDE AREA CODE) <b>201-687-7383</b>	EPA ID NO. <b>NJD04881027</b>
ADDRESS (STREET - CITY - STATE - ZIP CODE) <b>49 CENTRAL AVE., SO. KEARNY, NEW JERSEY 07032</b>			
TRANSPORTER NO. 2		PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE - ZIP CODE)			
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY <b>BARON BLAKESLEE</b>		PHONE (INCLUDE AREA CODE)	EPA ID NO. <b>NJD04881027</b>
SITE ADDRESS (STREET - CITY - STATE - ZIP CODE) <b>49 CENTRAL AVE. SO. KEARNY, NEW JERSEY 07032</b>			

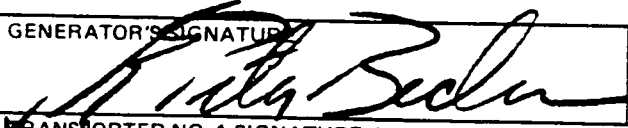
IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE

THIS FORM IS NO. \_\_\_\_\_ OF A TOTAL OF \_\_\_\_\_. THE FIRST MANIFEST DOCUMENT NO. IS NJ → \_\_\_\_\_

1.	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS		EPA HAZ CODE	EPA WASTE TYPE
							NO.	TYPE		
1.	<b>HAZARDOUS WASTE TF</b> <b>LIQUID NOS FLUOROCARBON</b>	<b>ORM-E</b>	<b>HA9189</b>	<input checked="" type="checkbox"/>	<b>305-1500</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>7</b>	<b>H00</b>
2.				<input type="checkbox"/>						
3.				<input type="checkbox"/>						
4.				<input type="checkbox"/>						
5.				<input type="checkbox"/>						
6.				<input type="checkbox"/>						

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE 	TITLE <b>EXECUTIVE VICE PRESIDENT</b>	DATE SHIPPED	EXPECTED ARRIVAL DATE
		MO. DAY YR.	MO. DAY YR.
TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT		TRANSPORTER NO. 1 VEHICLE ID NO. <b>SJS W HS 134 TAB</b>	DATE RECEIVED <b>03 25 81</b> MO. DAY YR.
OF RECEIPT OF SHIPMENT		<b>SJS W HS 632 TAB</b>	<b>03 25 81</b> MO. DAY YR.

TEAR AT THIS PERFORATION

GENERATOR'S COPY

GENERATOR EPA ID NO.

NUD00021953.0

TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT

TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT

TRANSPORTER NO. 2 VEHICLE ID NO.

NTSWHSE339AB

DATE DELIVERED

MO. 3 DAY YR.

DATE RECEIVED

MO. 03 DAY 25 YR. 81

TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT

DATE DELIVERED

MO. DAY YR.

TREATMENT STORAGE OR DISPOSAL FACILITY INDICATION OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS

HANDLING METHOD

1	T	S	4			
2				5		
3				6		

This waste is accepted subject to the completion of necessary analysis.

TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE & CERTIFICATION

TITLE ASSISTANT TO

SOLVENT TERMINAL MGR

DATE RECEIVED

MO. 03 DAY 25 YR. 81

In case of emergency or spill immediately call the National Response Center (800) 424-8802 and the N.J. Dept. of Environmental Protection (609) 292-5560 (Day) (609) 292-7172 (Night)

DOCUMENT NO. NJ

0027957

## HAZARDOUS WASTE MANIFEST

PART A. GENERATOR'S COPY

DOCUMENT NO. NJ 0032433

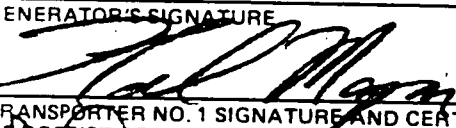
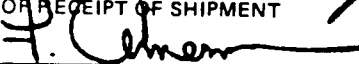
GENERATOR NAME <b>METZ METALLURGICAL CORP</b>		PHONE (INCLUDE AREA CODE) <b>201-54-1100</b>	EPA ID NO. <b>NJ 002195303</b>
ADDRESS (STREET - CITY - STATE - ZIP CODE) <b>3900 SA CLINTON AVE, SA PLAINFIELD, N.J. 07080</b>			
TRANSPORTER NO. 1 <b>F. Amerman TRK</b>		PHONE (INCLUDE AREA CODE) <b>609-647-5067</b>	EPA ID NO. <b>NJ 000029450</b>
ADDRESS (STREET - CITY - STATE - ZIP CODE) <b>64 B. Mountain View Rd WARREN, NJ 07060</b>			
TRANSPORTER NO. 2		PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE - ZIP CODE)			

TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY <b>MARISOL INCORPORATED</b>		PHONE (INCLUDE AREA CODE) <b>201-469-5100</b>	EPA ID NO. <b>NJ 00024544</b>
SITE ADDRESS (STREET - CITY - STATE - ZIP CODE) <b>125 FACTORY LANE, MIDDLESEX, N.J. 08846</b>			
IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE THIS FORM IS NO. <b>1</b> OF A TOTAL OF <b>1</b> . THE FIRST MANIFEST DOCUMENT NO. IS <b>NJ 0032433</b>			

PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS		EPA HAZ CODE	EPA WASTE TYPE
						NO.	TYPE		
1. <b>HAZARDOUS WASTE LIQUID NOS</b>	<b>EXEMPT</b>		1						<b>D001</b>
2. <b>HYDROCARBONS AROMATIC 100</b>			1	<b>100</b>	<b>1</b>	<b>002</b>	<b>01</b>	<b>T</b>	<b>D001</b>
3. <b>XYLENE</b>			1	<b>100</b>	<b>1</b>	<b>002</b>	<b>01</b>	<b>T</b>	<b>D001</b>
4. <b>ISOPAR-E</b>			1	<b>800</b>	<b>1</b>	<b>016</b>	<b>01</b>	<b>T</b>	<b>D001</b>
5. <b>GEAR BOX OIL</b>			1	<b>3000</b>	<b>1</b>	<b>060</b>	<b>01</b>	<b>T</b>	<b>D001</b>
6.									

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE 	TITLE <b>ENVIRONMENTAL ENGINEER</b>	DATE SHIPPED <b>04 02 81</b> MO. DAY YR.	EXPECTED ARRIVAL DATE <b>04 02 81</b> MO. DAY YR.
TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION 		TRANSPORTER NO. 1 VEHICLE ID NO. <b>S6313AA</b>	DATE RECEIVED <b>04 02 81</b> MO. DAY YR.

TEAR AT THIS DEBORDATION

GENERATOR EPA ID NO.

NJ D00219530

## B. GENERATOR'S COPY

TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF  
LIVERY AND NON-TAMPERING WITH SHIPMENT

DATE DELIVERED

MO. DAY YR.

TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION  
OF RECEIPT OF SHIPMENT

TRANSPORTER NO. 2 VEHICLE ID NO.

DATE RECEIVED

MO. DAY YR.

TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF  
DELIVERY AND NON-TAMPERING WITH SHIPMENT

DATE DELIVERED

MO. DAY YR.

TREATMENT STORAGE OR DISPOSAL FACILITY INDICATION OF ANY DIFFERENCES BETWEEN MANIFEST  
AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS

HANDLING METHOD

1	T 63	4	
2		5	
3		6	

TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE &amp; CERTIFICATION

TITLE

DATE RECEIVED

MO. DAY YR.

In case of emergency or spill immediately call the National Response  
Center (800) 424-8802 and the N.J. Dept. of Environmental Protection  
(609) 292-5560 (Day) (609) 292-7172 (Night)

DOCUMENT NO. NJ 0032433

HYDROCARBONS  
AROMATIC 100

XYLENE

ISOPAR-E

GEAR OIL

EXAMPLE

1	100	1	002	01	T	D001
1	100	1	002	01	T	D001
1	800	1	016	01	T	D001
1	3000	1	060	01	T	D001

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN  
SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper  
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are consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid  
permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE

TITLE

DATE SHIPPED

EXPECTED ARRIVAL DATE

MO. DAY YR.

MO. DAY YR.

TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION  
OF RECEIPT OF SHIPMENT

TRANSPORTER NO. 1 VEHICLE ID NO.

DATE RECEIVED

MO. DAY YR.

TEAR AT THIS SEPARATION

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
HAZARDOUS WASTE MANIFEST

PART A: GENERATOR'S COPY

DOCUMENT NO. NJ 0032435

GENERATOR NAME <b>METZ METALLURGICAL CORP</b>	PHONE (INCLUDE AREA CODE) <b>201-561-1100</b>	EPA ID NO. <b>NJ0000219530</b>
ADDRESS (STREET - CITY - STATE - ZIP CODE) <b>3900 SOUTH CLINTON AVE. - SO. PLAINFIELD - N.J. 07080</b>		
TRANSPORTER NO. 1 <b>MARISOL INC.</b>	PHONE (INCLUDE AREA CODE) <b>201-469-5100</b>	EPA ID NO. <b>NJ0000454549</b>
ADDRESS (STREET - CITY - STATE - ZIP CODE) <b>125 FACTORY LANE, MIDDLESSEX, N.J. 08846</b>		
TRANSPORTER NO. 2	PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE - ZIP CODE)		

TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY <b>MARISOL INC.</b>	PHONE (INCLUDE AREA CODE) <b>201-469-5100</b>	EPA ID NO. <b>NJ0000454549</b>
SITE ADDRESS (STREET - CITY - STATE - ZIP CODE) <b>125 FACTORY LANE, MIDDLESSEX, N.J. 08846</b>		

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE  
THIS FORM IS NO. 1 OF A TOTAL OF 1 THE FIRST MANIFEST DOCUMENT NO. IS NJ

PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	TYPE	EPA HAZ CODE	EPA WASTE TYPE
1. <b>ISOPAR-E SOLVENT NOS</b>	<b>FLAMMABLE LIQUID</b>	<b>1993</b>	<b>1</b>	<b>1.600</b>	<b>1</b>	<b>1</b>	<b>02</b>	<b>I</b>	<b>D001</b>
2.									
3.									
4.									
5.									
6.									

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

**ISO PAR - E**

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE <b>C. D. DiMaggio</b>	TITLE <b>PERSONAL ENGINEER</b>	DATE SHIPPED <b>12 / 18 / 81</b> MO. DAY YR.	EXPECTED ARRIVAL DATE <b>12 / 18 / 81</b> MO. DAY YR.
TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT <b>EDUARDO P. GARDELLA</b>	TRANSPORTER NO. 1 VEHICLE ID NO. <b>SWA2809AB</b>	DATE RECEIVED <b>12 / 01 / 81</b> MO. DAY YR.	

TEAR AT THIS DISSEMINATION



NJD00219530

TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT

DATE DELIVERED

12 01 81  
MO. DAY YR.

TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT

TRANSPORTER NO. 2 VEHICLE ID NO.

DATE RECEIVED

MO. DAY YR.

DATE DELIVERED

MO. DAY YR.

TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT

TREATMENT STORAGE OR DISPOSAL FACILITY INDICATION OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS

HANDLING METHOD

1 7634  
2  
3  
5  
6

TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE & CERTIFICATION

TITLE

DATE RECEIVED

12 01 81  
MO. DAY YR.

Anne Braden (Anne Braden)

Dispatcher

In case of emergency or spill immediately call the National Response Center (800) 424-8802 and the N.J. Dept. of Environmental Protection (609) 292-5560 (Day) (609) 292-7172 (Night)

DOCUMENT NO. NJ 0032435

1.	ISOPAR-E	FLAMMABLE	1993	1	1600	1	1	02	I	0001
2.	SOLVENT NOS	L19WID								
3.										
4.										
5.										
6.										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

ISO PAR - E

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GENERATOR'S SIGNATURE

PERCLOS  
ENGINEER

DATE SHIPPED

12 1 81  
MO. DAY YR.

EXPECTED ARRIVAL DATE

12 1 81  
MO. DAY YR.

TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT

TRANSPORTER NO. 1 VEHICLE ID NO.

DATE RECEIVED

12 01 81  
MO. DAY YR.

EDWARD P. GARDELLA

SWA2809HB

TEAR AT THIS REPERFORATION

# HAZARDOUS WASTE MANIFEST

PART A: GENERATOR'S COPY

DOCUMENT NO. NJ 0032434

GENERATOR NAME <b>METZ METALLURGICAL CORP</b>		PHONE (INCLUDE AREA CODE) <b>201-561-1100</b>	EPA ID NO. <b>NJ000219530</b>
ADDRESS (STREET - CITY - STATE - ZIP CODE) <b>3900 SO. CLINTON AVE. SO. PLAINFIELD, N.J. 07080</b>			
TRANSPORTER NO. 1 <b>INTERSTATE OIL</b>		PHONE (INCLUDE AREA CODE) <b>263-2020</b>	EPA ID NO. <b>NJ0000301X8</b>
ADDRESS (STREET - CITY - STATE - ZIP CODE) <b>60412 Boonton NJ 07005</b>			
TRANSPORTER NO. 2		PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE - ZIP CODE)			
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY <b>MARISOL INC</b>		PHONE (INCLUDE AREA CODE) <b>201-469-5100</b>	EPA ID NO. <b>NJ000245454</b>
SITE ADDRESS (STREET - CITY - STATE - ZIP CODE) <b>185 FACTORY LANE, MIDDLESX, N.J. 08846</b>			
IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE			
THIS FORM IS NO. _____ OF A TOTAL OF _____ THE FIRST MANIFEST DOCUMENT NO. IS NJ → _____			

1.	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS		EPA HAZ CODE	EPA WASTE TYPE
							NO.	TYPE		
	<b>XYLENE</b>	<b>FLAMMABLE</b>	<b>UN1307</b>	<b>1</b>	<b>50</b>	<b>1</b>	<b>1</b>	<b>01</b>	<b>I</b>	<b>U239</b>
	<b>WASTE GREASE OIL</b>	<b>Combustible</b>		<b>1</b>	<b>330</b>	<b>1</b>	<b>15</b>	<b>01</b>		
3.										
4.										
5.										
6.										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE 	TITLE <b>PLANT ENGINEER</b>	DATE SHIPPED <b>11/25/81</b> MO. DAY YR.	EXPECTED ARRIVAL DATE <b>11/25/81</b> MO. DAY YR.
TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION 	TRANSPORTER NO. 1 VEHICLE ID NO. <b>NJ05-6216A2</b>	DATE RECEIVED <b>11/25/81</b> MO. DAY YR.	

TEAR AT THIS SEPARATION

ATTACHMENT B: GENERATOR'S COPY

GENERATOR EPA ID NO.

MSD 00219530

TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT

*John Chad JOHN CHAD*

DATE DELIVERED

11 25 81  
MO. DAY YR.

TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT

TRANSPORTER NO. 2 VEHICLE ID NO.

DATE RECEIVED

MO. DAY YR.

TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT

DATE DELIVERED

MO. DAY YR.

TREATMENT STORAGE OR DISPOSAL FACILITY INDICATION OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS

HANDLING METHOD

1 7634  
2 7635  
3 6

TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE & CERTIFICATION

TITLE

DATE RECEIVED

*Anne Braden (Anne Braden)*

*Dispatcher*

11 25 81  
MO. DAY YR.

In case of emergency or spill immediately call the National Response Center (800) 424-8802 and the N.J. Dept. of Environmental Protection (609) 292-5560 (Day) (609) 292-7172 (Night)

DOCUMENT NO.

NJ

0032434

1	KYLENE	FLAMMABLE	1	30	1	1	01	I	4239
2	WASTE GREASE OIL	Combustible	1	30	1	15	01		
3									
4									
5									
6									

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE

TITLE

DATE SHIPPED

EXPECTED ARRIVAL DATE

*Plant Engineer*

11 25 81  
MO. DAY YR.

11 25 81  
MO. DAY YR.

TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT

TRANSPORTER NO. 1 VEHICLE ID NO.

DATE RECEIVED

*John Chad JOHN CHAD*  
MSD-621692

11 25 81  
MO. DAY YR.

TEAR AT THIS SEPARATION

2/16/83  
Incident Report #: RCRA Inspection

Subject: Me T Z Metallurgical Corp.

Page \_\_\_\_\_ of \_\_\_\_\_  
Date: March 6, 83

Findings and Summary:

On March 6, 83 I phoned the Mety Metallurgical Corp and spoke with Mr Noel Mayer plant engineer. I requested information regarding the copies of those generator requirements I was suppose to receive but have not at this time. Mr Mayer explained that the requirements were 90% finished and a little more time is needed before he can send me those copies. I informed him that a month is an additional amount of time that could be given for these requirements. He said it should be enough time to be in compliance with the generator regulations.

REFERENCE NO. 10

SFS 00004



*John Howard*

State of New Jersey  
DEPARTMENT OF THE TREASURY

P.O. BOX 1829  
STATE HOUSE  
TRENTON, NEW JERSEY 08625

FEB 1983

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

NOTICE OF VIOLATION  
AND OFFER OF SETTLEMENT

D.W.M. Case #82-08-25-003

Mr. Peter Metz  
Metz Metallurgical Corporation  
3900 South Clinton Avenue  
South Plainfield, N.J.

Dear Mr. Metz:

On August 25, 1982 as a result of a rupture of a fiberglass storage tank containing a hazardous substance (potassium hydroxide) at the Metz Metallurgical Corporation, 3900 So. Clinton Avenue, South Plainfield, New Jersey, approximately 1100 gallons of potassium hydroxide was allowed to be discharged onto the ground from which it might flow or drain into the waters of the State.

The incident summarized above was investigated by members of the Division of Waste Management, who determined that the following provisions of the Spill Compensation and Control Act and regulations promulgated thereunder were violated:

N.J.S.A. 58:10-23.11c

Discharging Hazardous Substances

N.J.S.A. 58:10-23.11e/

Failure to Immediately Notify the

N.J.S.A. 58:10-23.11u

Department of the Discharge

[see N.J.A.C. 7:1E-2.1(a)]

The above cited violations carry maximum statutory civil penalties of \$25,000 per day for each violation.

In accordance with the recommendations of the Department of Environmental Protection, and pursuant to the authority vested in me as Administrator of the New Jersey Spill Compensation and Control Fund by N.J.S.A. 58:10-23.11q, I am amenable to compromise and settle these claims for penalties for the sum of \$875.00.

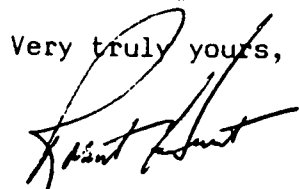
Should you decide to settle this matter, payment must be made within fifteen (15) days of your receipt of this letter. Payment must be sent to the Administrator, New Jersey Spill Compensation Fund, Department of Treasury, 135 West Hanover Street, Trenton, New Jersey 08625. Only checks or money orders drawn to the order of "New Jersey Spill Compensation and Control Fund" will be accepted. Your cancelled check or money order will serve as your receipt.

Should you decide not to accept this settlement offer or fail to forward payment within 15 days of receipt of this letter, this offer is rescinded, and this matter will be referred to the Office of the Attorney General with instructions to initiate a legal action for the maximum allowable penalty.

Acceptance of this settlement offer will satisfy your liability for civil penalties in connection with the above cited violations but will not relieve you of any other responsibility or obligation under the law, including the responsibility to pay for any damages which may have been caused by the discharge.

If you wish to make any inquiries or discuss this settlement offer, you may contact David Shotwell, Chief, Bureau of Compliance and Enforcement, Division of Waste Management at 120 Route 156, Yardville, N.J. 08620 or at (609) 292-5560.

Very truly yours,



Administrator,  
New Jersey Spill Compensation and Control Fund

Recommendation approved by:



Joseph Rogalski, Assistant Director  
Division of Waste Management  
Department of Environmental Protection

rh

REFERENCE NO. 11



# Metz Metallurgical Corporation



3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N.J. 07080 / (201) 561-1100 / TWX: 710-997-9524

E.P.A. ID # NJD002195303

Certified Mail #3851280

December 5, 1983

Mr. Frank Coolick, Chief  
Bureau of Hazardous Waste  
N.J.D.E.P.  
Division of Hazardous Waste Engineering  
32 E. Hanover St.  
CN-027  
Trenton, NJ 08625

Dear Mr. Coolick:

Metz Metallurgical Corporation is currently classified, in New Jersey, as a Hazardous Waste Treatment-Storage-Disposal (T-S-D) Facility. In July of 1982, Metz Metallurgical asked the U.S.E.P.A. to change its hazardous waste classification from a T-S-D facility to a generator of hazardous wastes. This change in classification was granted. Please see enclosures. The purpose of this letter is to request a similar reclassification in the State of New Jersey.

Metz Metallurgical is a manufacturer of precious metal products and as such, all our products are recyclable. Metz Metallurgical applied for a hazardous waste T-S-D status because we store and use chemical compounds listed in CFR - Title 40, Part 261.33. As part of the application procedure, Metz Metallurgical Corporation submitted to the U.S.E.P.A. hazardous waste permit application forms No's 1, 2 & 3. Forms No's 1 & 2 dealt with general information. Form No. 3 listed the actual treatment-storage processes. In not fully comprehending R.C.R.A., Metz Metallurgical listed one storage and three treatment processes; S01, T01, T0~~2~~<sub>3</sub> and T04 respectively.

T01 was a process that disassociated cyanide before its discharge into a Publicly Owned Treatment Works (P.O.T.W.) stream. The process that used cyanide has been eliminated and the product that was made from this process is now made without the use of cyanide. Therefore, T01 no longer exists.

T03 is listed in Form #3 as an incineration process. However, Metz Metallurgical Corporation's thermal reduction process takes place in a Dean Model S-500 multiple chamber controlled air stationary thermal reductor. Internally generated, in process precious metals bearing materials are processed in this thermal reductor for precious metal recovery. Such materials include: Precious Metals Recovery Department filter cake; methanol, water, silver mixtures; and plant trash. These materials have never been discarded; they are always processed for recovery of precious metal values. In addition, it is an industry standard that all such materials are likewise processed. It is clear that Metz Metallurgical Corporation does not have an "incineration" process. Therefore T03 does not apply to Metz Metallurgical Corporation.

Metz Metallurgical Corporation

Mr. Coolick, Chief  
Bureau of Hazardous Waste

Page 2

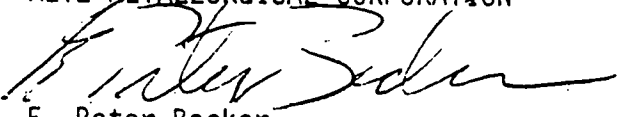
T04 is an unlisted process. Metz Metallurgical listed this as its precious metal recovery process before discharge into a P.O.T.W. stream. This discharge is not regulated by R.C.R.A., but by the Clean Water Act and the Middlesex County Sewerage Authority. *Explain*

Finally, S01 is a storage process for waste Freon T.F. that we generate. Waste Freon T.F. is stored in drums and transported off site within 90 days in accordance with N.J.A.C. 7:26-7.4.

From the above, it is clear that Metz Metallurgical Corporation is not a Hazardous Waste Treatment, Storage, or Disposal Facility as defined by R.C.R.A.. Furthermore, Metz Metallurgical Corporation is only a Hazardous Waste Generator. Therefore, we ask that you expedite our reclassification to a Generator status. If you have any questions please call us at 201-561-1100.

Sincerely,

METZ METALLURGICAL CORPORATION

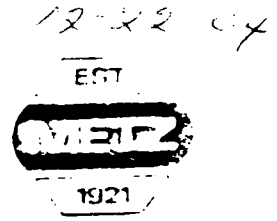
  
E. Peter Becker  
Executive Vice President

EPB:nct

Enclosures

cc: W. Peter Metz  
Noel Mazar  
Carmine DiMeglio

Metz  
Metallurgical  
Corporation



100 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N. J. 07080 (201) 561-1100

January 11, 1983

Mr. Bill Sharples  
State of New Jersey  
Department of Environmental Protection  
Division of Waste Management  
32 E. Hanover St., CN 027  
Trenton, NJ 08625

Dear Mr. Sharples:

This letter is in response to your notice dated January 7, 1983, stating that Metz Metallurgical Corporation is in violation of N.J.S.A. 13:1E-1 et seq, for failing to file a 1982 T-S-D, (treatment, storage, disposal) facility annual report.

Metz Metallurgical asked the United States Environmental Protection Agency to be reclassified from a hazardous waste T-S-D facility to a generator. Please see attached letter for details.

On January 10, 1983 Metz Metallurgical telephoned Mr. Tom Taccone of the United States Environmental Protection Agency and asked if our reclassification had been made. Mr. Taccone said that we were presently classified as a generator. Furthermore, Metz Metallurgical filed a hazardous waste generator report on February 19, 1982.

If we can, in any way, help you in clearing up this matter, please feel free to call us at 201-561-1100.

Sincerely,

METZ METALLURGICAL CORPORATION

Carline DiMeglio  
Process Engineer

CM:nct

Enclosure

cc: Mr. Tom Taccone

Metz Metallurgical  
Corporation



100 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N.J. 07080 / (201) 561-1100 / TWX: 710-997-9524

July 2, 1982

Dr. Richard Baker  
Chief of Permits Administration  
United States Environmental Protection Agency  
Region II  
26 Federal Plaza  
New York, NY 10278

Dear Dr. Baker:

As you are well aware, according to subtitle C of the Resource Conservation and Recovery Act (RCRA), Metz Metallurgical Corp. (EPA ID No. N.JD002195303) is required to fulfill its financial requirements as a Hazardous Waste Treatment-Storage-Disposal (T-S-D) facility by July 6, 1982. After much deliberation, Metz Metallurgical has determined that it is not a T-S-D facility and therefore asks to be reclassified as a generator.

Metz Metallurgical is a manufacturer of precious metals and as such; all our by-products are recyclable. We burn our by-products and our customers by-products in an incinerator; collect the ash and reprocess it, as described in the T-S-D Federal application.

Metz Metallurgical applied for a T-S-D facility status because we store chemical compounds listed in CFR - Title 40, Part 261.33. These chemical compounds are as follows: silver cyanide, formaldehyde, methanol, hydrazine hydrate and freon TF. The silver cyanide, formaldehyde and hydrazine hydrate are reagents and are consumed in our operations. Freon TF is used as a degreaser. The waste from freon TF is stored and transported off site to be distilled in accordance with The Hazardous Waste Manifest System. Methanol is used as a drying agent. The by-product methanol is burned for its heat content.

Metz Metallurgical Corporation is very willing to do whatever has to be done to abide by RCRA, and it would appreciate your help in amending our application to a generator status.

If you have any questions please do not hesitate to give us a call at 201-561-1100.

Sincerely,

METZ METALLURGICAL CORPORATION

*Peter Becker*  
Peter Becker  
Executive Vice President

PB:kc

REFERENCE NO. 12

# Metz Metallurgical Corporation



3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N.J. 07080 / (201) 561-1100 / TWX: 710-997-9524

EPA ID#NJD002195303

December 12, 1983

Mr. Frank Coolick  
Bureau Chief, Hazardous Waste Engineering  
N.J.D.E.P.  
Division of Hazardous Waste Engineering  
32 E. Hanover St.  
CN-027  
Trenton, NJ 08625

Re: Silver bearing materials entering Metz Metallurgical Corporation.

Dear Mr. Coolick:

Silver bearing materials entering Metz Metallurgical Corporation's manufacturing and refining processes must contain a minimum of 50,000 ppm silver. Anything less than 50,000 ppm silver would not be economical to process and Metz Metallurgical Corporation would not handle it.

Incoming silver bearing materials are items such as the following: A) High purity commercial silver bullion (99.9+%); B) Off grade silver bullion (50%-90+%); C) Coin silver; D) Sterling silver; E) Precious metal powders (platinum, palladium, gold and silver bearing materials/powders typically 40%-60% precious metal content); F) Silver slurry (fine silver mud in water - approximately 50% silver); G) Silver chloride slurry (silver chloride mud in water - approximately 75% silver); H) Spent silver catalyst (elemental silver on alumina - approximately 10%-15%); I) Silver sulfide slurry (silver sulfide in water - approximately 20%-30% silver); J) Photographic metallic chip (90%-99% silver); and K) Returned Metz Metallurgical Corporation products; included are off specification production dimensional and composition; left over material from customer production processes - returned to reclaim value, and returns for inventory adjustments. All of the above returned Metz products are remelted and put back into new products. It becomes new Metz products as soon as it is melted, manufactured to new orders and shipped. The kind of customers returning these types of materials would be electrical and mechanical device manufacturers. The materials would consist of strip, sheet, and wire with a silver content ranging from 99.95% to 15%. Silver is alloyed with such metals as copper, zinc, nickel, cadmium and tin.

It is the practice of the industry that precious metal bearing materials such as those received by Metz Metallurgical Corporation are never discarded, are never abandoned or disposed of. Also, it is the industry practice that such materials are always further processed for the reclamation of precious metal values.

# Metz Metallurgical Corporation

December 12, 1983

Mr. Coolick

Page 2

Furthermore, in the industry, such materials are considered "in process" until they (1) are either consumed by incorporation into a final product or (2) are in such a concentration that would make the economical recovery of said precious metals impossible. (These latter materials would not be accepted at Metz Metallurgical Corporation.) From the above, it is clear that the industry does not consider precious metal bearing materials such as those received by Metz Metallurgical Corporation to be a waste. Rather, these materials are considered to be "in process streams".

Precious metal bearing "in process streams", generated by customers of Metz Metallurgical Corporation and received by Metz Metallurgical Corporation, are never discarded, abandoned or disposed of and are always further processed. Furthermore, the above "in process streams" are not produced in certain hazardous waste generating processes such as those listed in N.J.A.C. 7:26-8.13, and 8.14. Also, these process streams would never be charged directly to Metz Metallurgical Corporation's proposed Rotary Thermal Reductor but would go to other equipment to be processed. (Please see enclosed process flow sheets.)

Other internally generated precious metals bearing "in process streams" would be charged to the proposed Rotary Thermal Reductor for precious metal recovery. Such materials include Precious Metals Recovery Department filter cake; methanol, water, silver mixtures; and plant trash. These materials have never been discarded and they are always processed for recovery of precious metal values. In addition, it is and industry standard that all such materials are likewise processed. It is clear from the above that Metz Metallurgical Corporation does not, nor does it have any intention to, receive or process hazardous wastes (either from customers or from internally generated operations). Rather, Metz Metallurgical Corporation handles various high grade precious metal bearing "in process streams". We therefore ask that your office declare the before mentioned "in process streams" to be fed to Metz Metallurgical Corporation's proposed Rotary Thermal Reductor to be Non-Hazardous. We also ask that you expedite notification of the conclusion to N.J.D.E.P. Bureau of Air Pollution Control so that they may begin prompt disposition of our pending applications for Permit to Construct and Certificate to Operate Control Apparatus or Equipment. If you have any questions regarding the above, please contact me as soon as possible at 201-561-1100.

Thank you.

METZ METALLURGICAL CORPORATION



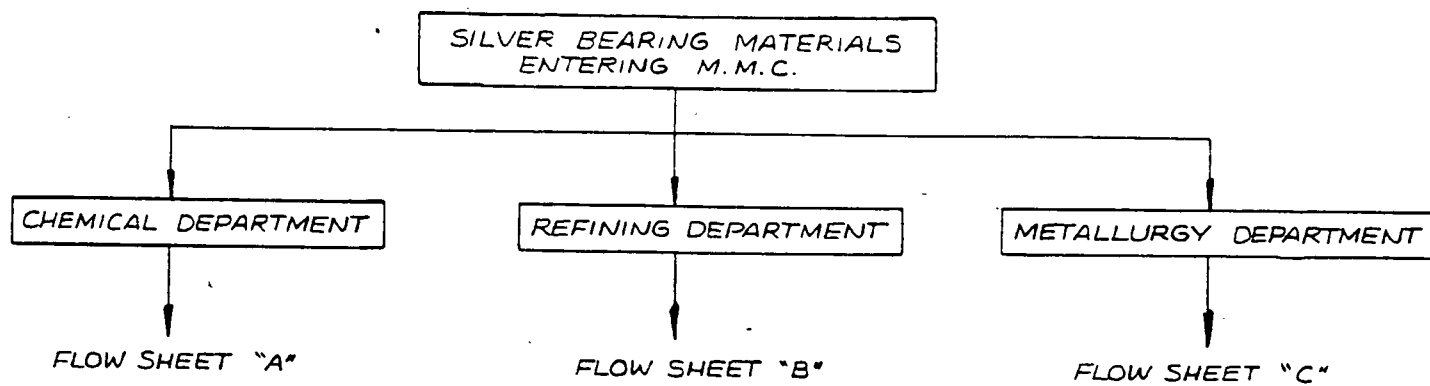
Noel Mazar  
Plant Engineer

NM:nct

Enclosure

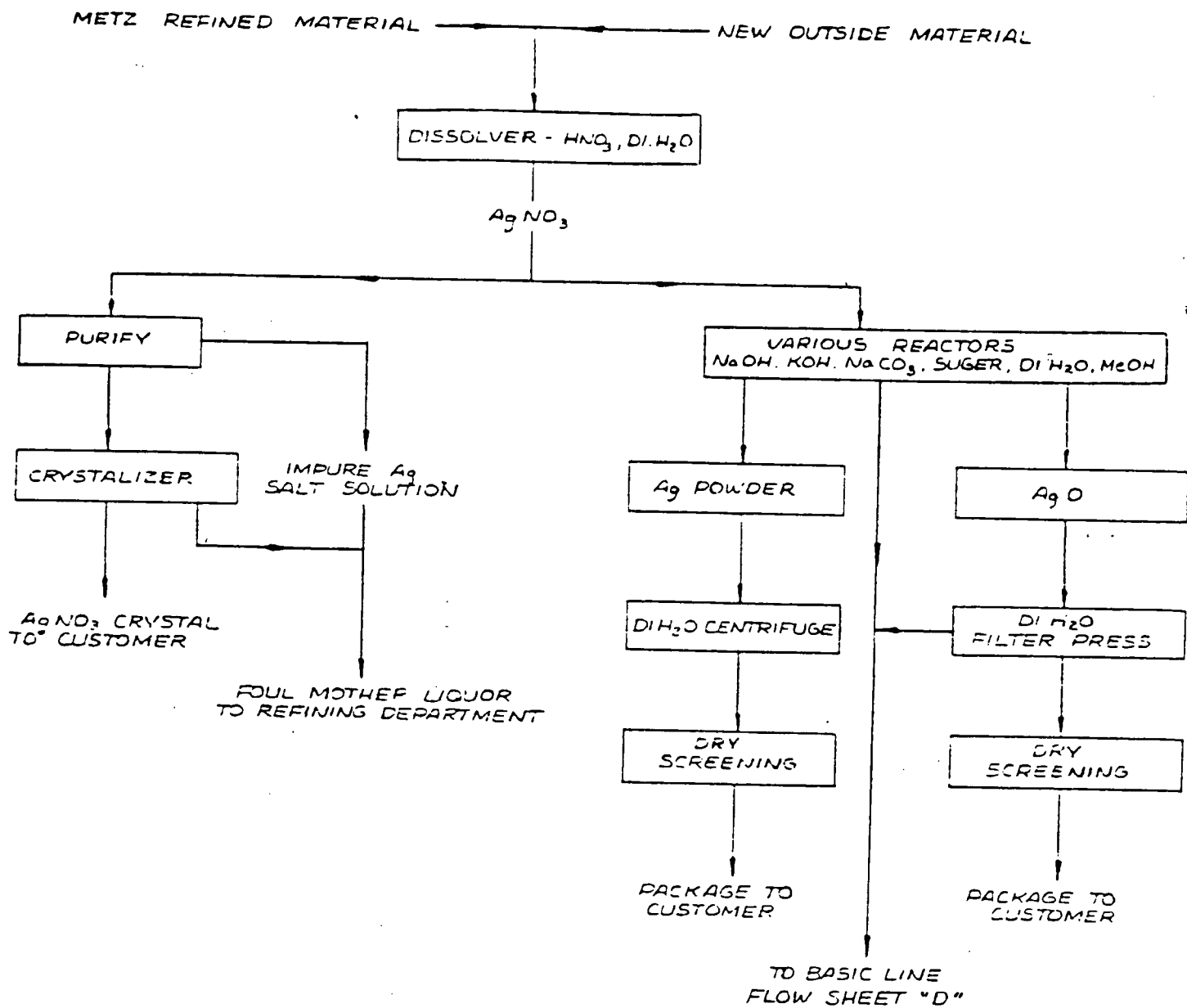
cc: W. Peter Metz  
E. Peter Becker  
Carmine DiMeglio  
Dave Schrier, N.J.D.E.P.

# METZ METALLURGICAL CORPORATION

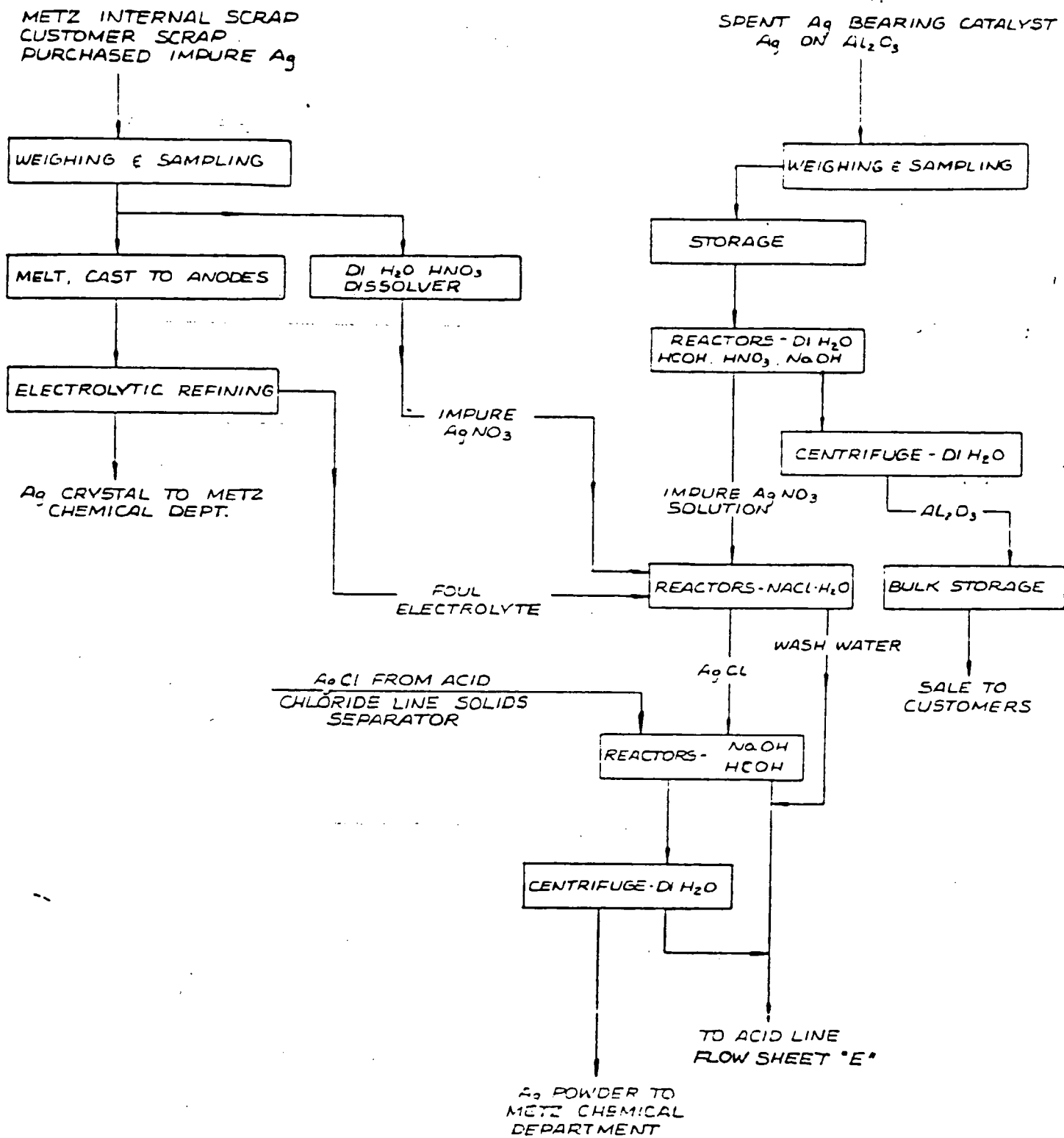




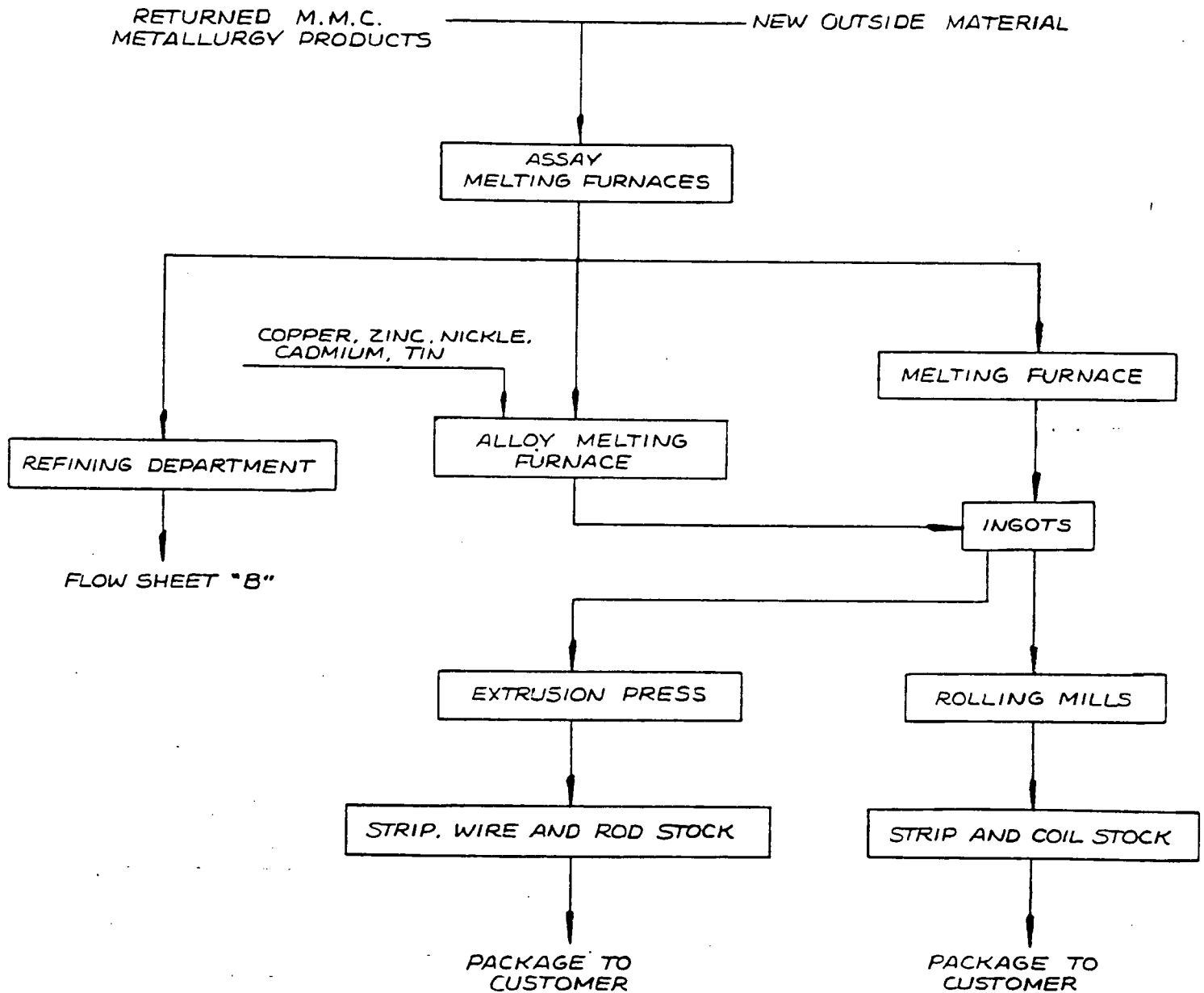
# CHEMICAL DEPARTMENT - FLOW SHEET "A"



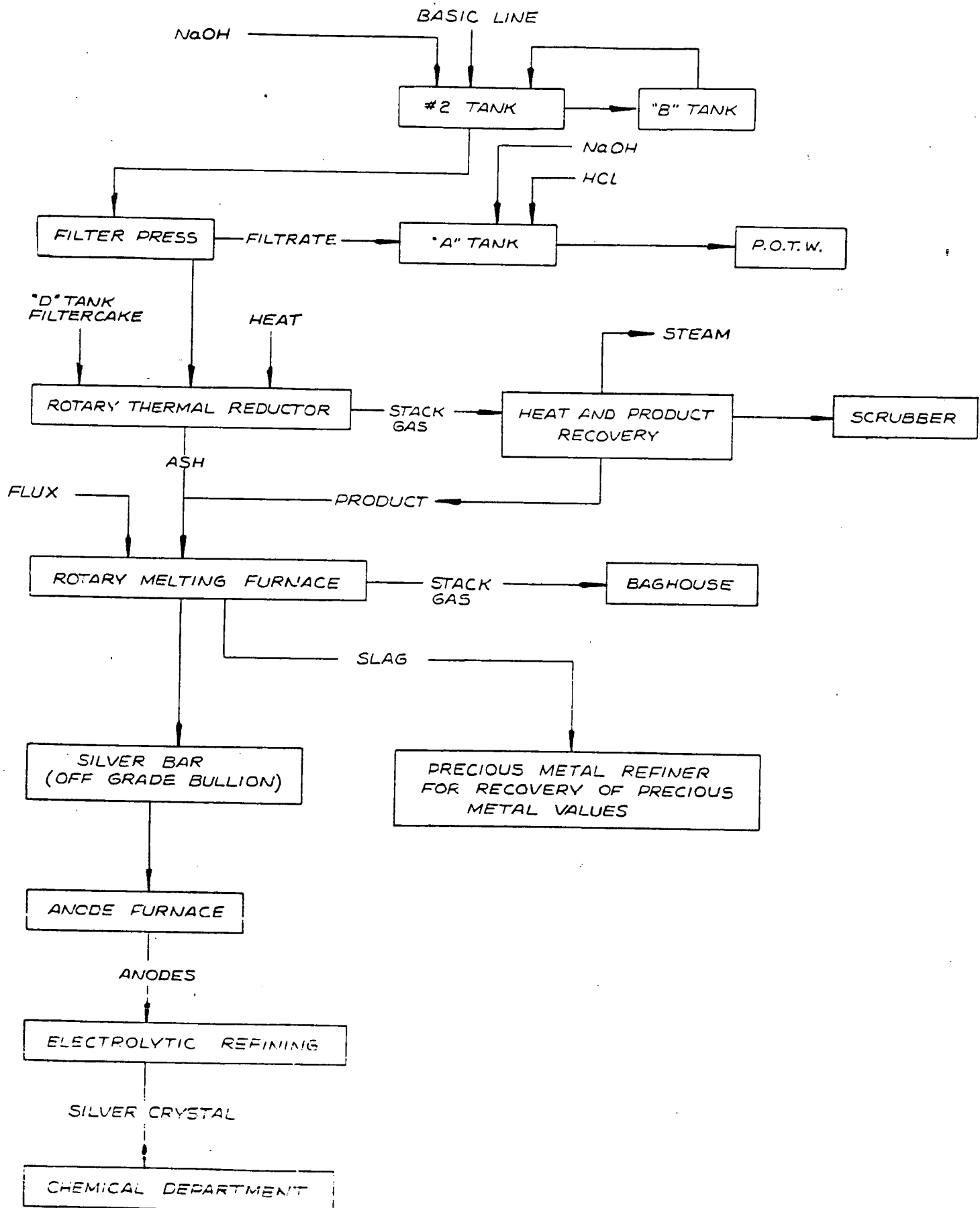
# REFINING DEPARTMENT - FLOW SHEET "B"



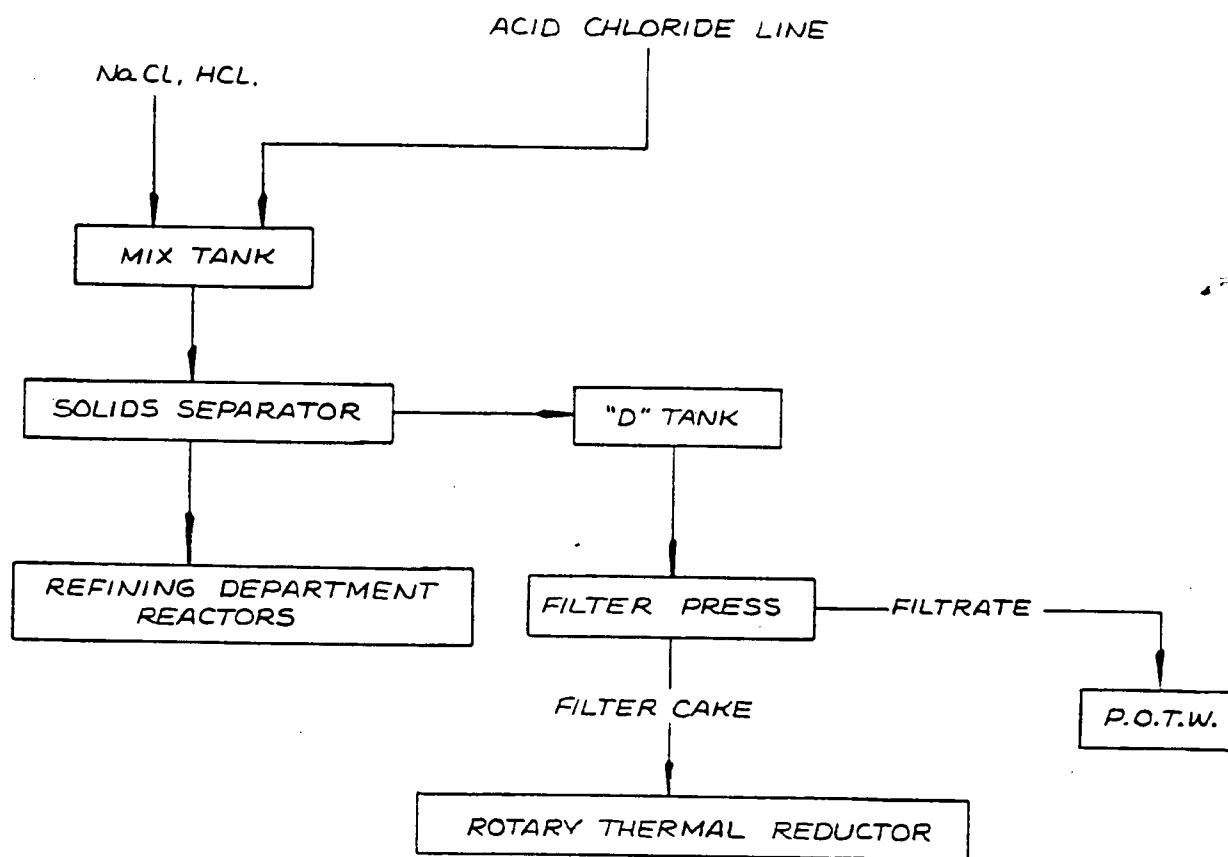
# METALLURGY DEPARTMENT - FLOW SHEET "C"



BASIC LINE - FLOW SHEET "D"



# ACID CHLORIDE LINE - FLOW SHEET "E"



REFERENCE NO. 13



# Endangered and Threatened Wildlife in New Jersey

**Endangered** species are those whose prospects for survival in the state are in immediate danger because of a loss or change of habitat, over-exploitation, predation, competition or disease. Immediate assistance is needed to prevent extinction.

**Threatened** species are those who may become endangered if conditions surrounding the species begin or continue to deteriorate.

## FISH

### Endangered

Shortnose Sturgeon\*

### Threatened

Atlantic Sturgeon  
American Shad  
Brook Trout  
Atlantic Tomcod

## AMPHIBIANS

### Endangered

Tremblay's Salamander  
Blue-spotted Salamander  
Eastern Tiger Salamander  
Pine Barrens Treefrog  
Southern Gray Treefrog

### Threatened

Long-tailed Salamander  
Eastern Mud Salamander

## REPTILES

### Endangered

Corn Snake  
Bog Turtle  
Timber Rattlesnake  
Atlantic Hawksbill Turtle\*  
Atlantic Loggerhead Turtle\*  
Atlantic Ridley Turtle\*  
Atlantic Leatherback Turtle\*

### Threatened

Wood Turtle  
Northern Pine Snake  
Atlantic Green Turtle

*Continued*

## Endangered and Nongame Species Program

List Established: December 19, 1974

List Revised: March 29, 1979

July 20, 1987

★

January 17, 1984

★

May 6, 1985

New Jersey Department of Environmental Protection • Division of Fish, Game & Wildlife

## BIRDS

### Endangered

Pied-billed Grebe†  
Cooper's Hawk  
Northern Harrier†  
Bald Eagle\*  
Peregrine Falcon\*  
Piping Plover  
Upland Sandpiper  
Least Tern  
Roseate Tern  
Black Skimmer  
Short-eared Owl†  
Cliff Swallow†  
Sedge Wren  
Henslow's Sparrow  
Vesper Sparrow†  
Loggerhead Shrike

### Threatened

Osprey  
Red-shouldered Hawk  
Northern Goshawk  
Great Blue Heron  
Yellow-crowned Night Heron  
Barred Owl  
Red-headed Woodpecker  
Bobolink  
Savannah Sparrow  
Ipswich Sparrow  
Grasshopper Sparrow  
American Bittern†  
Black Rail

## MAMMALS

### Endangered

Sperm Whale\*  
Blue Whale\*  
Finback Whale\*  
Sei Whale\*  
Humpback Whale\*  
Right Whale\*

*(\*Indicates Federal and State endangered status.)*

*(†only Breeding population endangered)*

## PERSPECTIVE

Species are listed as endangered when record of past and present population indicate that the species is on the decline. Habitat—that place that animals need to live—is ever changing and when habitats change, some species survive and others decline. In New Jersey habitat change is partially responsible for the decline of 54 endangered and threatened species. The Endangered and Nongame Species Program is responsible for protecting these species found in the state.

### WE NEED YOUR HELP

Reports of sightings of endangered and threatened species are welcome! When you observe any species listed, jot down the date, time, exact location and any behavioral observations and send to CN 400, Trenton, NJ 08625. Your contributions to the Endangered and Nongame Wildlife Conservation Fund on your NJ Income Tax form continue to make endangered species protection possible.

**HABITAT & REPRODUCTION = SURVIVAL**



## DEFINITION OF ACRONYMS

### FEDERAL STATUS

LE-listed endangered.  
LT-listed threatened.  
PE-proposed endangered.  
PT-proposed threatened.  
C2-candidate for listing.

### STATE STATUS

LE-listed as endangered. (short-eared owl winter pop. listed as stable:8)  
LT-listed as threatened.

### COUNTY OCCURRENCE

Y-present year-round, breeds.  
N-present year-round, not recorded breeding.  
B-present during the summer, breeds.  
W-present during the winter.  
T-present as a transient.  
?-present status undetermined.  
\*\*indicates that the county is within the species known breeding range.

5\18\87

NEW JERSEY NATURAL HERITAGE PROGRAM  
POTENTIAL THREATENED AND ENDANGERED SPECIES  
IN MIDDLESEX COUNTY

AMERICAN BITTERN  
BOTAURUS LENTIGINOSUS

FEDERAL STATUS:  
STATE STATUS: LT

COUNTY  
OCCURRENCE: Y

HABITAT COMMENTS

Fresh water bogs, swamps, wet fields, cattail and bulrush marshes, brackish and saltwater marshes and meadows.

BARRED OWL  
STRIX VARIA

FEDERAL STATUS:  
STATE STATUS: LT

COUNTY  
OCCURRENCE: ?

HABITAT COMMENTS

Dense woodland and forest (conif. or hardwood), swamps, wooded river valleys, cabbage palm-live oak hammocks, especially where bordering streams, marshes, and meadows.

BOBOLINK  
DOLICHONYX ORYZIVORUS

FEDERAL STATUS:  
STATE STATUS: LT

COUNTY  
OCCURRENCE: ?

HABITAT COMMENTS

Tall grass areas, flooded meadows, prairie, deep cultivated grains, alfalfa and clover fields. In migration and winter also in rice fields, marshes, and open woody areas.

BOG TURTLE  
CLEMMYS MUHLENBERGII

FEDERAL STATUS: C2  
STATE STATUS: LE

COUNTY  
OCCURRENCE: ?

HABITAT COMMENTS

Slow, shallow rivulets of sphagnum bogs, swamps, and marshy meadows; sea level to 1200 m in Appalachians. Commonly basks on tussocks in morning in spring and early summer. Hibernates in subterreanean rivulet or seepage area.

COOPER'S HAWK  
ACCIPITER COOPERII

FEDERAL STATUS:  
STATE STATUS: LE

COUNTY  
OCCURRENCE: W\*

HABITAT COMMENTS

Primarily mature forest, either broadleaf or coniferous, mostly the former; also open woodland and forest edge.

GREAT BLUE HERON  
ARDEA HERODIAS

FEDERAL STATUS:  
STATE STATUS: LT

COUNTY  
OCCURRENCE: N\*

HABITAT COMMENTS

Freshwater and brackish marshes, along lakes, rivers, bays, lagoons, ocean beaches, mangroves, fields, and meadows.

5\18\87

HENSLOW'S SPARROW  
AMMODRAMUS HENSLOWII

FEDERAL STATUS:  
STATE STATUS: LE

COUNTY  
OCCURRENCE: ?

HABITAT COMMENTS

Open fields and meadows with grass interspersed with weeds or shrubby vegetation, especially in damp or low-lying areas. In migration and winter also in grassy areas adjacent to pine woods or second-growth woodland.

LONGTAIL SALAMANDER  
EURYCEA LONGICAUDA

FEDERAL STATUS:  
STATE STATUS: LT

COUNTY  
OCCURRENCE: ?

HABITAT COMMENTS

Streamsides, spring runs, cave mouths, forested floodplains in South. May disperse into wooded terrestrial habitats in wet weather. Hides under rocks, logs, and other debris.

NORTHERN HARRIER  
CIRCUS CYANEUS

FEDERAL STATUS:  
STATE STATUS: LE

COUNTY  
OCCURRENCE: Y

HABITAT COMMENTS

Marshes, meadows, grasslands, and cultivated fields. Perches on ground or on stumps or posts.

PEREGRINE FALCON  
FALCO PEREGRINUS

FEDERAL STATUS: LE  
STATE STATUS: LE

COUNTY  
OCCURRENCE: Y

HABITAT COMMENTS

"A variety of open situations from tundra, moorlands, steppe and seacoasts, especially where there are suitable nesting cliffs, to high mountains, more open forested regions, and even human population centers..."

PIED-BILLED GREBE  
PODILYMBUS PODICEPS

FEDERAL STATUS:  
STATE STATUS: LE

COUNTY  
OCCURRENCE: ?

HABITAT COMMENTS

Lakes, ponds, sluggish streams, and marshes; in migration and in winter also in brackish bays and estuaries.

PINE BARRENS TREEFROG  
HYLA ANDERSONII

FEDERAL STATUS: C2  
STATE STATUS: LE

COUNTY  
OCCURRENCE: ?

HABITAT COMMENTS

Streams, ponds, cranberry bogs, and other wetland habitats. Post-breeding habitat the surrounding woodlands.

5\18\87

SAVANNAH SPARROW  
PASSERCULUS SANDWICHENSIS

FEDERAL STATUS:  
STATE STATUS: LT

COUNTY  
OCCURRENCE: W\*

HABITAT COMMENTS

"Open areas, especially grasslands, tundra, meadows, bogs, farmlands, grassy areas with scattered bushes, and marshes, including salt marshes in the BELDINGI and ROSTRATUS groups (Subtropical and Temperate zones)".

SHORT-EARED OWL  
ASIO FLAMMEUS

FEDERAL STATUS:  
STATE STATUS: LE/S

COUNTY  
OCCURRENCE: W\*

HABITAT COMMENTS

Open country, including prairie, meadows, tundra, moorlands, marshes, savanna, dunes, fields, and open woodland. Roosts by day on ground or on low open perches.

UPLAND SANDPIPER  
BARTRAMIA LONGICAUDA

FEDERAL STATUS:  
STATE STATUS: LE

COUNTY  
OCCURRENCE: B

HABITAT COMMENTS

Grasslands, especially prairies, dry meadows, pastures, and (in Alaska) scattered woodlands at timberline; very rarely in migration along shores and mudflats.

WOOD TURTLE  
CLEMMYS INSCULPTA

FEDERAL STATUS:  
STATE STATUS: LT

COUNTY  
OCCURRENCE: Y

HABITAT COMMENTS

Vicinity of streams and rivers. In streams and in wooded areas and fields adjacent to streams in summer. In streams in spring and fall. Hibernates in banks or bottoms of streams in winter.

REFERENCE NO. 14

CERTIFIED MAIL  
#P439576247  
RETURN RECEIPT REQUESTED



*Joel  
Columbick*

State of New Jersey  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WASTE MANAGEMENT  
32 E. Hanover St., CN 028, Trenton, N.J. 08625

DR. MARWAN M. SADAT, P.E.  
DIRECTOR

LINO F. PEREIRA, P.E.  
DEPUTY DIRECTOR

07 FEB 1984

PAB:

delete T03, S01

E. Peter Becker, Executive Vice President  
Metz Metallurgical Corporation  
3900 South Clinton Avenue  
South Plainfield, New Jersey 07080

RE: Metz Metallurgical Corporation  
DELISTING REQUEST  
EPA ID NO. NJD002195303

Dear Mr. Becker:

The Bureau of Hazardous Waste Engineering (the Bureau) acknowledges receipt of your letters dated December 5, and 12, 1983 in which you provide additional information with respect to your request that Metz Metallurgical be delisted as a TSD facility from the NJDEP interim status list.

Metz Metallurgical Corporation has filed with the USEPA as a generator and TSD facility under the following activity codes:

1. Containerized/drummed waste (S01) at 10 gallons
2. Tank treatment (T01) at 2400 gallons/day
3. Incineration (T03) at 20 gallons/hour
4. Treatment - Other (T04) at 40,000 gallons/day

The Bureau's understanding between the original filing and current activities is as follows:

1. Accumulation of waste Freon T. F. in drums for 90 days or less prior to off-site disposal.
2. Tank treatment (T01) is an activity that no longer exists.
3. Incineration (T03) of precious metals bearing materials, considered to be non-hazardous waste.
4. Elementary neutralization (T04) of waste water prior to discharge to the Middlesex County Sewerage Authority.

Please notify this Bureau immediately if the above understanding is incorrect.

...continued

DEC 19 1984

The Bureau concludes, based on the assumption that the above understanding is correct, that Metz Metallurgical Corp. will be delisted regarding hazardous waste activity S01 provided the following are complied with:

1. All such waste is, within 90 days or less, shipped off-site to an authorized facility or placed in an on-site authorized facility as defined in N.J.A.C. 7:26-1.4.
2. The waste is placed in containers which meet the standards of N.J.A.C. 7:26-7.2 and are managed in accordance with N.J.A.C. 7:26-9.4(d).
3. The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container.
4. The generator complies with the requirements for owners and operators of N.J.A.C. 7:26-9.6 and 9.7 concerning preparedness and prevention, contingency plans and emergency procedures as well as N.J.A.C. 7:26-9.4(g) concerning personnel training.

Your letter of December 12, 1983 provides full explanation on material processing at Metz Metallurgical Corp. The Bureaus of Hazardous Waste Engineering and Hazardous Waste Classification and Manifest are both of the opinion that materials burned in the incinerator are non-wastes. Therefore, Metz Metallurgical Corp. is delisted regarding hazardous waste activity T03.

In regard to activities T01 and T04, further information is needed before delisting. An explanation shall be provided on the T01 activity and how this process was "closed". Specifically, has/have the tank(s) been decontaminated, removed, reused; do cyanides or other wastes still remain, etc.

It is unclear whether the T04 process described in your December 5, 1983 letter is the tank "A" treatment provided on Flow Sheet "D" supplied with your December 12, 1983 letter. This discrepancy needs to be clarified. Also provide further information on the influent waste water prior to treatment in the "A" tank and/or the T04 process, whichever is the case. The information shall include but not be limited to the average and peak range of pH, physical and chemical nature of the waste water mainly specifying characteristic constituents and their concentration. This Bureau will respond to Metz directly on whether the activities are subject to N.J.A.C. 7:14A-4 (Additional Requirements for an Industrial Waste Management Facility).

The requested information shall be supplied within thirty (30) days of receipt of this letter. Failure to submit the above requested information may result in enforcement action.

...continued

E. Peter Becker

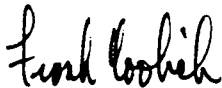
-3-

67 FEB 1984

This written acknowledgement of the delisting of codes S01 and T03 from Metz Metallurgical's interim TSD status is based expressly on the review of the aforementioned correspondence. This letter makes no claim as to the extent and physical condition of the actual hazardous waste activities occurring at the site mentioned above. To operate a hazardous waste facility without prior approval from the DEP is a violation of the Solid Waste Management Act N.J.S.A. 13:1E-1 et seq.

If you have any questions regarding this letter, feel free to contact Scott Baker of my staff at (609) 292-8504.

Very truly yours,



Frank Coolick, Chief  
Bureau of Hazardous Waste Engineering

EP7/jb

c: Joel Golumbek  
USEPA, Region II



REFERENCE NO. 15

# Metz Metallurgical Corporation



3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N.J. 07080 / (201) 561-1100 / TWX: 710-997-9524

EPA ID# NJD 0002195303

Certified Mail #P05 3851353

February 23, 1984

Mr. Frank Coolick, Chief  
Bureau of Hazardous Waste  
N.J. D.E.P.  
Division of Hazardous Waste Engineering  
32 E. Hanover Street  
CN-027  
Trenton, NJ 08625

RE: Reply to Certified Mail #P439576247  
Delisting Request

Dear Mr. Coolick:

This letter is in response to your certified letter dated February 7, 1984 requesting additional information on activity codes T01 and T04.

T01 was a process that disassociated cyanide before its discharge into a P.O.T.W. stream. After this process was eliminated the equipment was found to be free of cyanide and other wastes.

The cyanide destruct unit consisted of a multicompartment tank with mixers, metering pumps, and pH monitoring equipment. This equipment is no longer in use and feed pipes to it have been disconnected.

T04 is "A" tank in flow sheet "D" supplied in our letter dated December 12, 1983. To further help clarify Metz Metallurgical's "A" tank treatment we have corrected the enclosed flow sheet D & E. Please note all chemical streams go to a P.O.T.W. via "A" tank. There is no way chemical waste streams can to to a P.O.T.W. without first going through "A" tank.

"A" tank is a 15,000 gallon baffled, agitated tank that is used to maintain a pH range between 5.5 and 9.0. The pH is maintained by addition of sodium hydroxide and hydrochloric acid. Liquid level is maintained by means of a stand pipe. Based on an average daily flow of 40,000 gallons per 10 hour day; "A" tank has a 2.87 hour residence time.

Metz Metallurgical does not have any chemical analysis on the streams entering "A" tank. A grab sample of the effluent from "A" tank is taken on a monthly basis.

# Metz Metallurgical Corporation

Mr. Frank Coolick, Chief  
Bureau of Hazardous Waste  
2/23/84  
Page 2

Plant ID # NJD 0002195303

Certified Mail #P05 3851353

We at Metz Metallurgical hope that this letter clarifies our activity codes T01 and T04. We therefore request that you expedite the delisting of activity codes T01 and T04. If we can be of further assistance please call us at 201-561-1100.

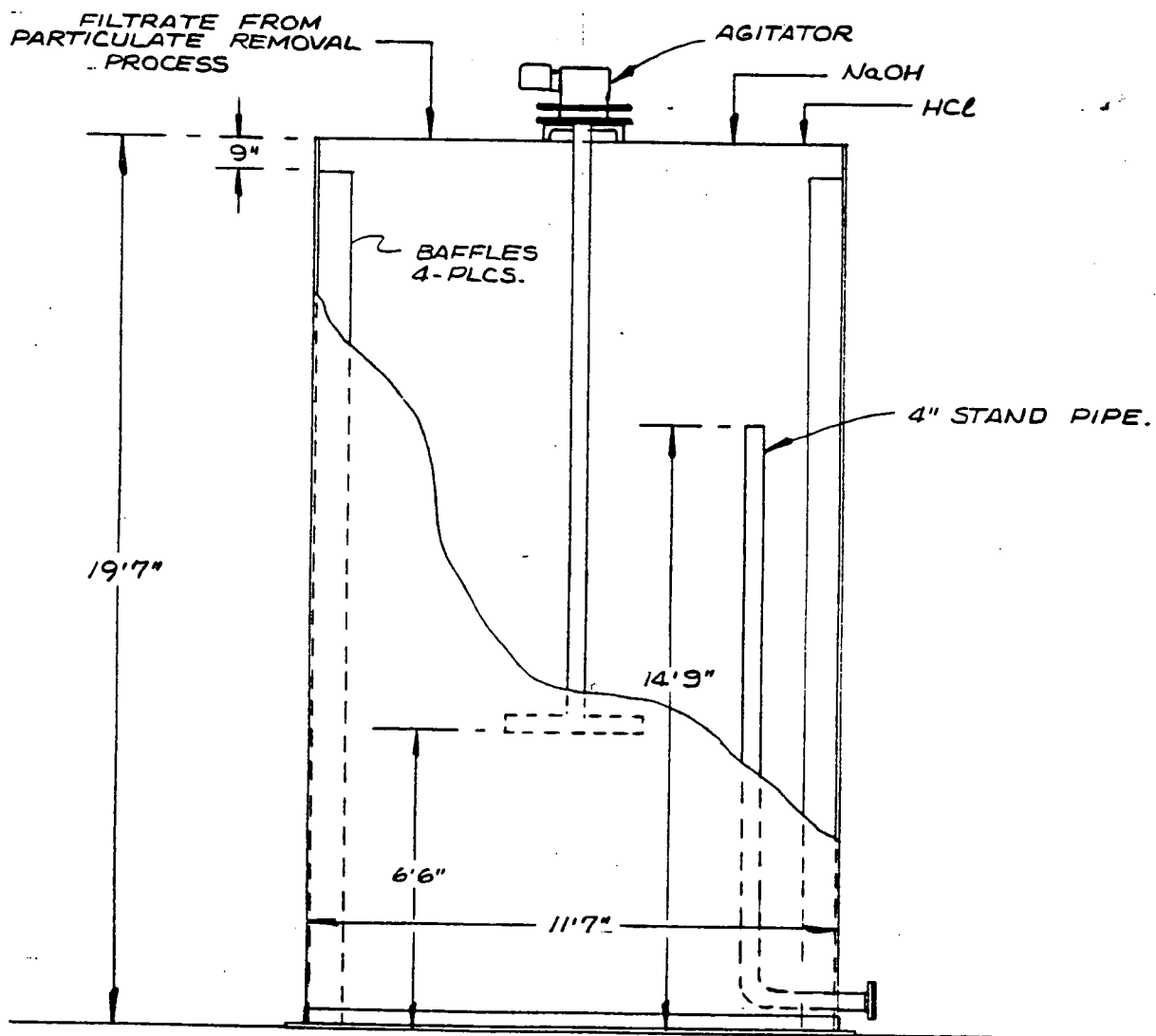
Sincerely,

METZ METALLURGICAL CORPORATION



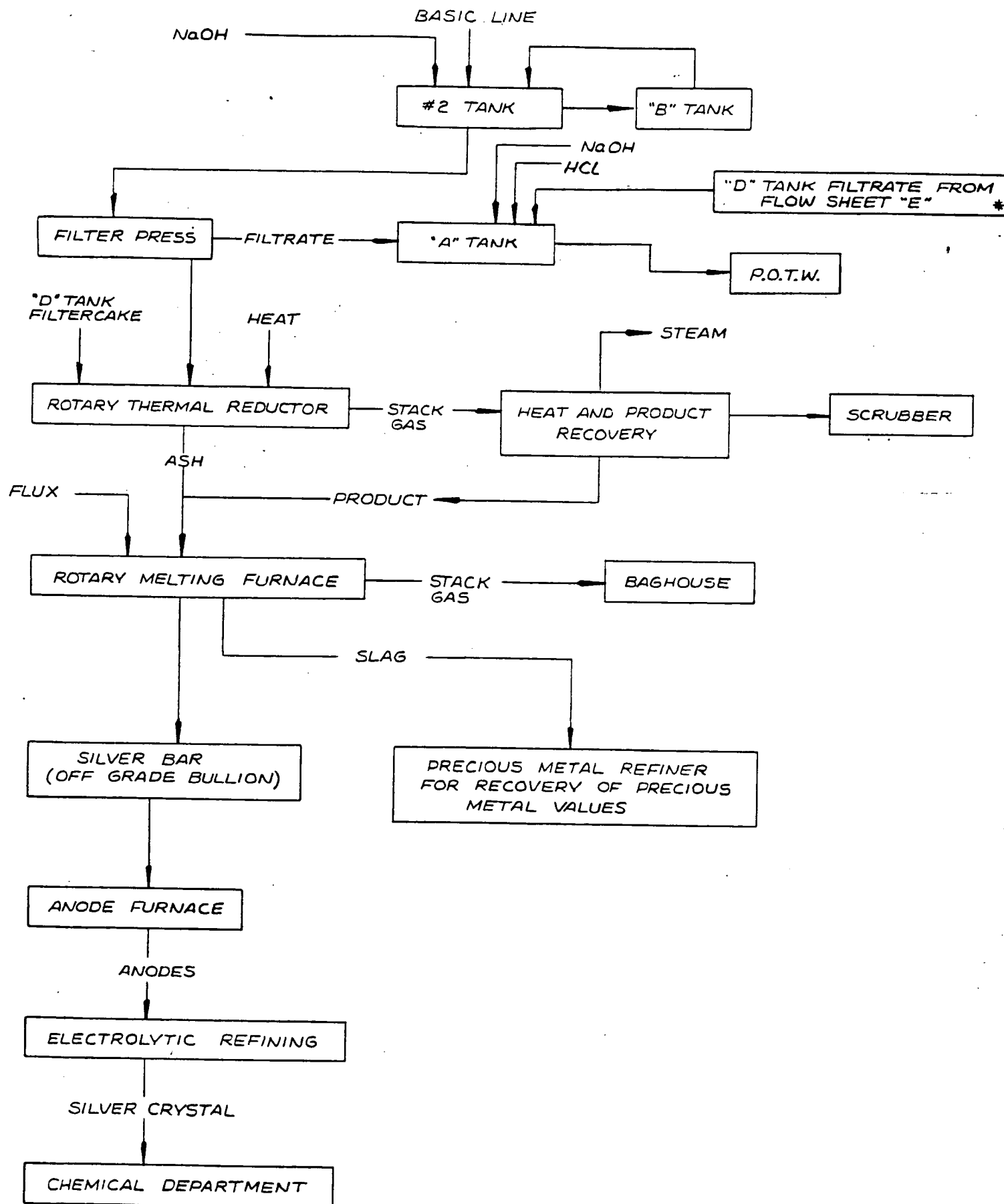
E. Peter Becker  
Executive Vice President

EPB:nct

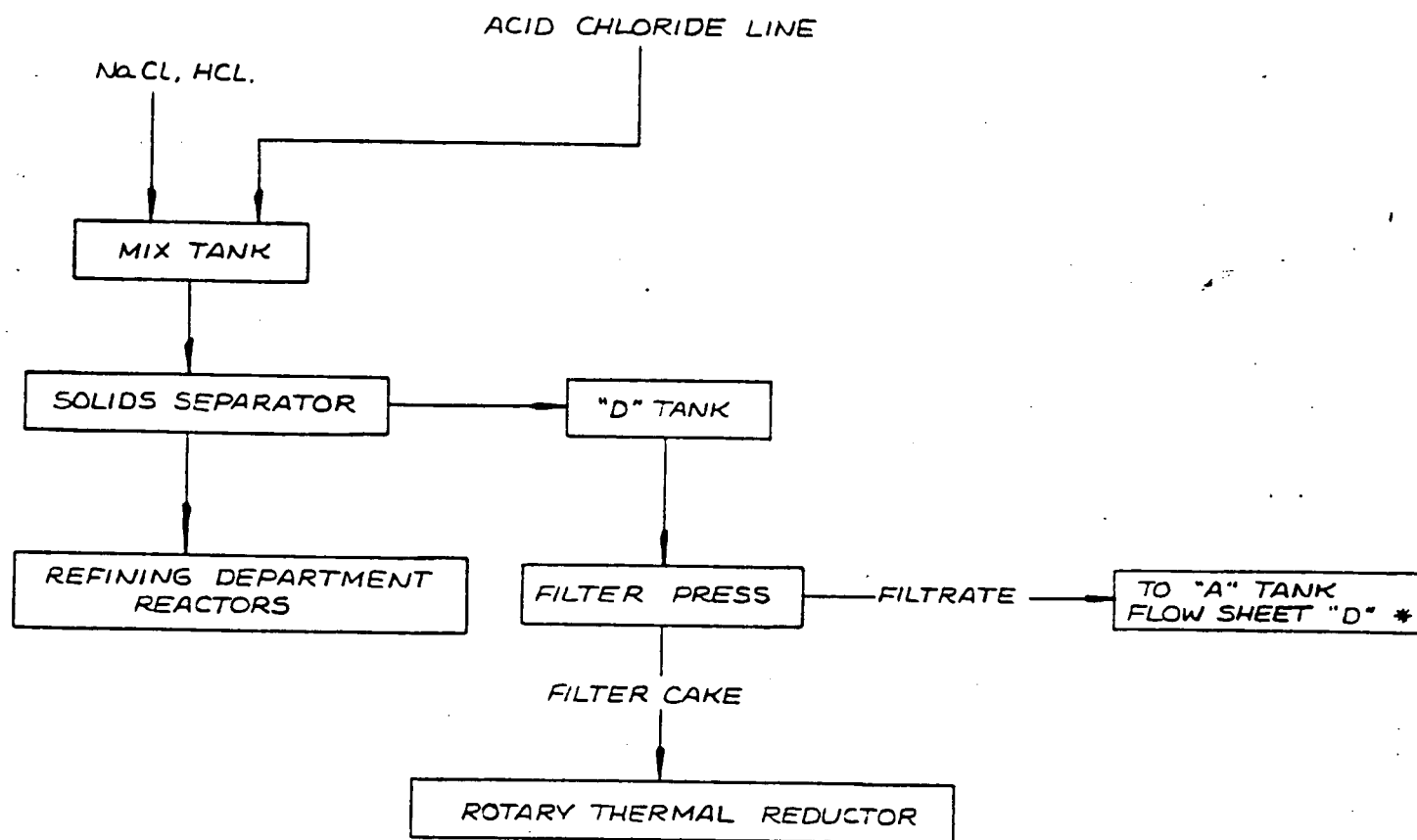


A-TANK 15,000 GALS.

BASIC LINE - FLOW SHEET "D"



# ACID CHLORIDE LINE - FLOW SHEET "E"



\* CORRECTED : FEB. 22, 1984

REFERENCE NO. 16



2-22-84 *from* C 172

State of New Jersey  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WASTE MANAGEMENT  
32 E. Hanover St., CN 028, Trenton, N.J. 08625

DR. MARWAN M. SADAT, P.E.  
DIRECTOR

LINO F. PEREIRA, P.E.  
DEPUTY DIRECTOR

13 APR 1984

E. Peter Becker, Executive Vice President  
Metz Metallurgical Corporation  
3900 S. Clinton Avenue  
South Plainfield, New Jersey 07080

RE: Delisting Request, Metz Metallurgical Corporation EPA ID NO. NJD002195303

Dear Mr. Becker:

The Bureau of Hazardous Waste Engineering has reviewed your letter of February 23, 1984 with respect to activity codes T01 and T04. Hazardous waste activities S01 and T03 were previously delisted in the letter of February 7, 1984 from the Bureau.

As described, The T01 process that disassociated cyanide has been eliminated and the equipment was found free of cyanides and other wastes.

Activity T04, wastewater treatment in Tank "A", is used to maintain a pH range between 5.5 and 9.0. The regulation of tank elementary neutralization is excluded from RCRA, but is not excluded from the NJDEP Hazardous Waste Management Regulations, under which it constitutes an "Industrial Waste Management Facility" (IWMF) subject to permitting under the NJPDES regulations by the Division of Water Resources in the State of New Jersey, pursuant to N.J.A.C. 7:14A-4.1. An IWMF is recognized by the NJDEP as a TSD activity not required to obtain a Hazardous Waste Facility Permit under N.J.A.C. 7:26-1 et seq. Your file has been forwarded to Mr. Paul Kurisko, Chief, Industrial Waste Management, for his review. If you have any questions regarding IWMF matters, please contact Mr. Kurisko at (609) 292-4860.

Metz Metallurgical is therefore delisted as an interim status TSD facility and is not subject to regulation under N.J.A.C. 7:26-9 and 12. Metz Metallurgical will be classified as a generator of hazardous waste and an existing IWMF facility.



13 APR 1984

This written acknowledgement of the exclusion of the above identified facility from permitting requirements under N.J.A.C. 7:26-9 and 12 is based expressly on the review of the aforementioned correspondence. This letter makes no claim as to the extent and physical conditions of the actual hazardous waste activities occurring at the site mentioned above.

The issuance of this delisting letter by the Department does not indicate, or imply, and should not be construed as a waiver of any requirements pursuant to the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq. and regulations promulgated thereunder concerning the New Jersey Pollutant Discharge Elimination System, N.J.A.C. 7:14A-1 et seq. If your facility is in any of the regulated categories identified in the above cited regulations, you are hereby directed to apply for any and all permits necessary within ninety days to the Bureau of Ground Water Discharge Permits, CN 029, Trenton, New Jersey 08625. Applications may be obtained by calling (609) 292-0424.

If you have any questions on this matter please call Scott Baker of my staff at (609) 292-9880.

Very truly yours,

*Ernest G. Kulhavy, Jr.*

Frank Coolick, Chief  
Bureau of Hazardous Waste Engineering

EP7/jb

c: Joel Columbek  
USEPA Region II

Ken Goldstein  
NJDEP DWR

Dave Shotwell  
NJDEP DWM BCE

Ron Corcory  
NJDEP DWM BFO

REFERENCE NO. 17

NJDEP INSPECTION FORM

Report Prepared for:

Generator ☒Transporter ☐HWM (TSD) facility ☐Facility InformationName: METZ METALLURGICAL CORPORATIONAddress: 3900 SOUTH CANTON AVENUESOUTH PLAINFIELD NJ 07080Lot: 29.01 and 30 Block: 467.01County: MIDDLESEXPhone: 201-561-1100EPA ID#: NJDO02175303Date of Inspection: THURSDAY 4/26/84 AND FRIDAY 4/27/84Participating PersonnelState or EPA personnel: STEPHEN J. CARTERANJDEP, DIVISION OF WASTE MANAGEMENTFacility personnel: MR. BECKER - EXECUTIVE VICE PRESIDENTHARRY KAPLAN - MARKETING MANAGERCARMINE D. MCELIG - PROCESS ENGINEERReport Prepared by Name: STEPHEN J. CARTERARegion: CENTRALTelephone #: 609-292-5367Reviewed by: [Signature] [Signature]Date of Review: 6-13-84 6-14-84

FACILITY NAME: MCTE METALLURGICAL CORP

ADDRESS: 3700 SOUTH CLINTON AVENUE  
SOUTH BRIMFIELD NJ 07080

COUNTY: MIDDLESEX

EPA ID #: NJD CC 2195303

DATE OF INSPECTION: THURSDAY 4/26/94 AND FRIDAY 4/27/94

4/26 / 4/27  
TIME IN: 1330 HR / 1030 HR

4/26 / 4/27  
TIME OUT: 1630 HR / 1700 HR

PHOTOS TAKEN



YES



NO

If yes, how many? \_\_\_\_\_

SAMPLES TAKEN



YES



NO

NUMBER OF SAMPLES \_\_\_\_\_

NUDEP ID # \_\_\_\_\_

MANIFESTS REVIEWED



YES



NO

Number of manifests in compliance 8

Number of manifests not in compliance \_\_\_\_\_

List manifest document numbers of those manifests not in compliance.

## Summary of Findings

### Facility Description and Operations

Mety is a manufacturer of precious metal products. Its products are purchased and used as raw materials by numerous industries such as the semi-conductor, photographic, high conductivity, electronic, aerospace, mechanical device and electrical industries and by mirror and chemical catalyst manufacturers.

Mety receives silver bearing materials in various forms (ingots, bullion, sterling silver, used X-Ray and photographic film, off-spec products returned by Mety customers, etc.). Mety processes and refines these materials in various ways to change their size, shape and form and transform them into wire, ribbon, coils, strips, rods, powders, flakes, foil and other desired forms. Depending on the product desired, other metals such as copper, zinc, nickel, cadmium and tin are alloyed with the silver.

Depending on the type of incoming material and the final product desired Mety conducts 3 basic types of processing and manufacturing operations which are handled by 3 Mety departments: the chemical department, the refining department and the metallurgy department. Mety sent flow charts of what happens in these

(cont.)

## Summary of Findings

### Facility Description and Operations

departments to the Bureau of Hazardous Waste Engineering in a letter dated 12/12/83. These flow charts are included at the end of the Summary section of this report.

There are many different activities that Mett conducts and it is not feasible or possible to go into detail about each one in this report. However for illustrative purposes I will touch on one: Mett accepts spent catalyst from the chemical and petrochemical industries. For example, these catalysts are used in reforming towers at oil refineries. The spent catalyst contains silver nitrate ( $AgNO_3$ ). Mett receives the catalyst in drums, recovers the silver from the catalyst and refines it to pure silver. Mett then sends the pure silver itself or returns it to the customer. What remains, alumina, is sold to refractory manufacturers.

Mett originally notified the EPA and DEP that it has a hazardous waste treatment/disposal process onsite: TO3-Incineration. This consists of 2 existing incinerators or burners and one other incinerator which is almost on line. Mett processes various internally generated precious metal bearing materials in these incinerators and then recovers precious metals from the ashes. Some of the materials incinerated are burned for their heat content as well.

(cont)

## Summary of Findings

### Facility Description and Operations

In a letter dated 2/7/84 from Bureau of Hazardous Waste Engineering to Metg, BHEE opined that the materials burned in the incinerators are non-wastes and that Metg "is delisted regarding hazardous waste activity 703".

For the record, here is a breakdown of the 3 incinerators Metg has and the materials burned in them.

#### Incinerators:

① Dean Model 5-500 multiple chamber controlled air stationary thermal reactor. Is a wall unit. Handles solid and liquids. Primary fuel source is gas, secondary is solvents.

② Hydrox-o-later, Silent-Glo Corporation Model RL-10. Is free standing and smaller than the Dean. Handles solid waste and high grade silver. Burns gas as fuel.

③ Rotary Thermal Reactor. Not operating yet. Metg has applied for an air permit. Is designed to use gas as fuel ~~to~~ but will be modified to be able to burn solvents.

#### Materials put in incinerators:

① Used hexane and oil which contains precious metals. Is milling media from the Electro Metal Division (EMD) process. Dumps of this material are being stockpiled and will be burned in the Reactor when it goes on line. Was formerly

(cont)

Summary of Findings

Facility Description and Operations

burned in the Dead. Line 56 of these drums entered on pallets outside - all were plastic 55 gallon drums except 4 which were steel type. There was a small amount of oil spillage on the ground in this storage area. Metz had it cleaned up by the time of my return on Friday 4/27.

(2) Waste wash solution from the washing and dissolving of silver flakes with methanol. Stored in blue drums marked "Used Solvent"

(3) Filter cake from the Precious Metals Recovery Department in the onsite WWT. Stored in drums onsite. Is shipped offsite to National Refining Corp in Tennessee for refining. Will be burned in the Reductor when it is on line

(4) Fer - FARE from a milling process

(5) Contaminated protective clothing

(6) Baghouse dust

Other Comments:

Waste Oils - In the past Metz used to burn all its waste oils on site in its incinerators. Metz claimed that it ceased this practice when the waste oil regulations went into effect in January 1983. The approx 25 drums of waste oil onsite at this time represents the amount of oil Metz has generated since that date. Before shipping some of this oil offsite Metz will remove any silver chips (Cont.) in the oil by means of a high pressure filter.



## Summary of Findings

### Facility Description and Operations

- (2) Slag - Mety recovers the precious metals from the ash in the ~~the~~ incinerators by heating the ashes and adding fuel materials. One byproduct of this process is a floating residue called slag or skimmings. This slag is either shipped to Umat in Carters or put back in Mety's refining furnace.
- (3) Cyanide Destruction Unit - Mety originally reported this tank was a TC/ process (tank treatment) that dissociated cyanide before discharge to a Permit. Mety has subsequently attempted to delist this process because it claims that this process has been eliminated, the equipment is no longer used, and the feed pipes have been disconnected. I verified that the feed pipe has been disconnected. I also observed that there was some sludge remaining in the tank. Mety says that this sludge contains copper and silver and it will be processed onsite to recover these metals. They do not expect any waste to be generated as a result of this processing.
- (4) Mety is doing some filling in its back yard, using dirt and excavation debris. It says it has gotten an OK to do this from the Tri-City Conservation District. The filling is being done to fill in a swampy area.

~~XXXXXX~~ END

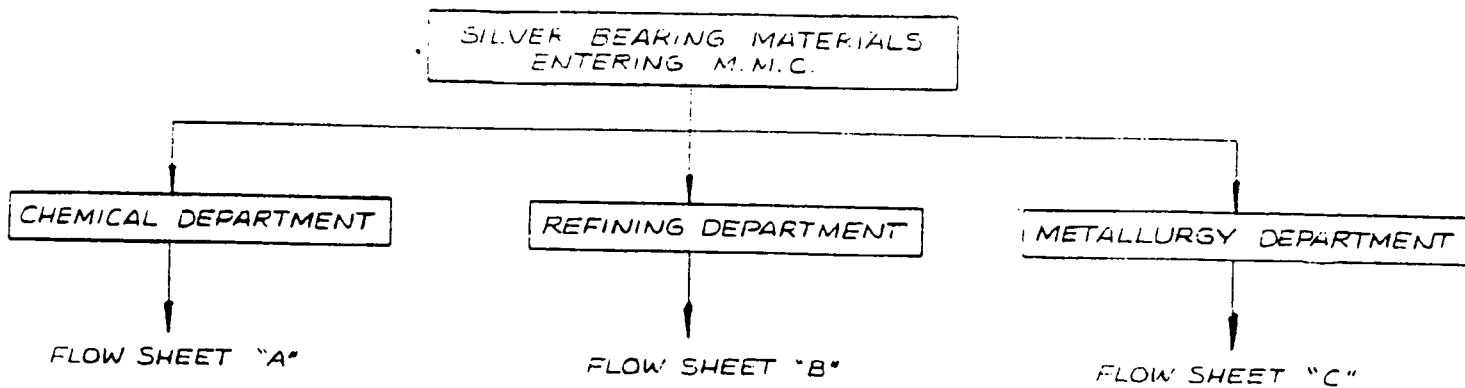
Describe the activities that result in the generation of hazardous waste.

- ① Lining and maintenance of equipment generates waste oils. Equipment includes rolling mills, compressors, agitators, gear boxes, etc.
- ② Vapor degreasing operation. Methanol vapor degreaser which utilizes Fluor TF (+ hydrofluorocarbon)
- ③ Lining and repair work done on transformers and capacitors

Identify the hazardous waste located on site, and estimate the approximate quantities of each. (Identify Waste Codes)

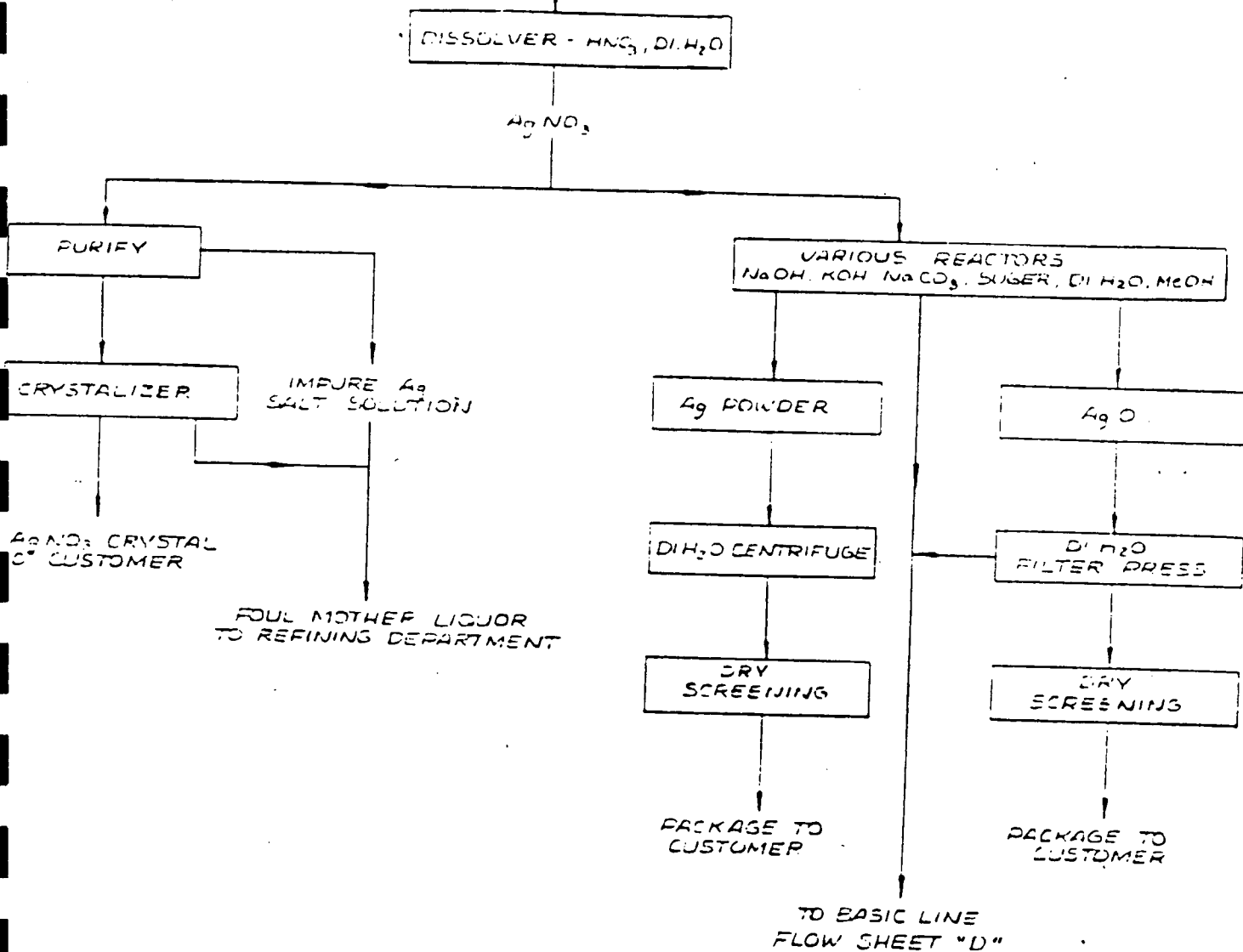
- ① Waste oils. A total of approx. 26 55 gallon steel drums.  
22 = stored outside, some empty, some full. Most appeared to contain some waste.  
1 = in compressor room  
3 = in room next to degreasers  
Methanol considering these to be waste type X726.
- ② Waste Fluor TF, waste type F001. 1 drum, 55 gallon, steel. Was a drum which Baron-Blakeslee, South Kearny, refused to take because it did not contain enough fluor ~~TF~~ (specific gravity was too low)
- ③ Waste oil, waste type X387. 3 55 gallon steel drums stored in Building B. Contain <sup>leaking</sup> capacitors from some induction furnace controls and waste generated during the removal of these capacitors. 2 of the drums have been accumulated since the end of January 1984. The 3rd has been accumulated since 3/20/84.

METZ METALLURGICAL CORPORATION



# CHEMICAL DEPARTMENT - FLOW SHEET "A"

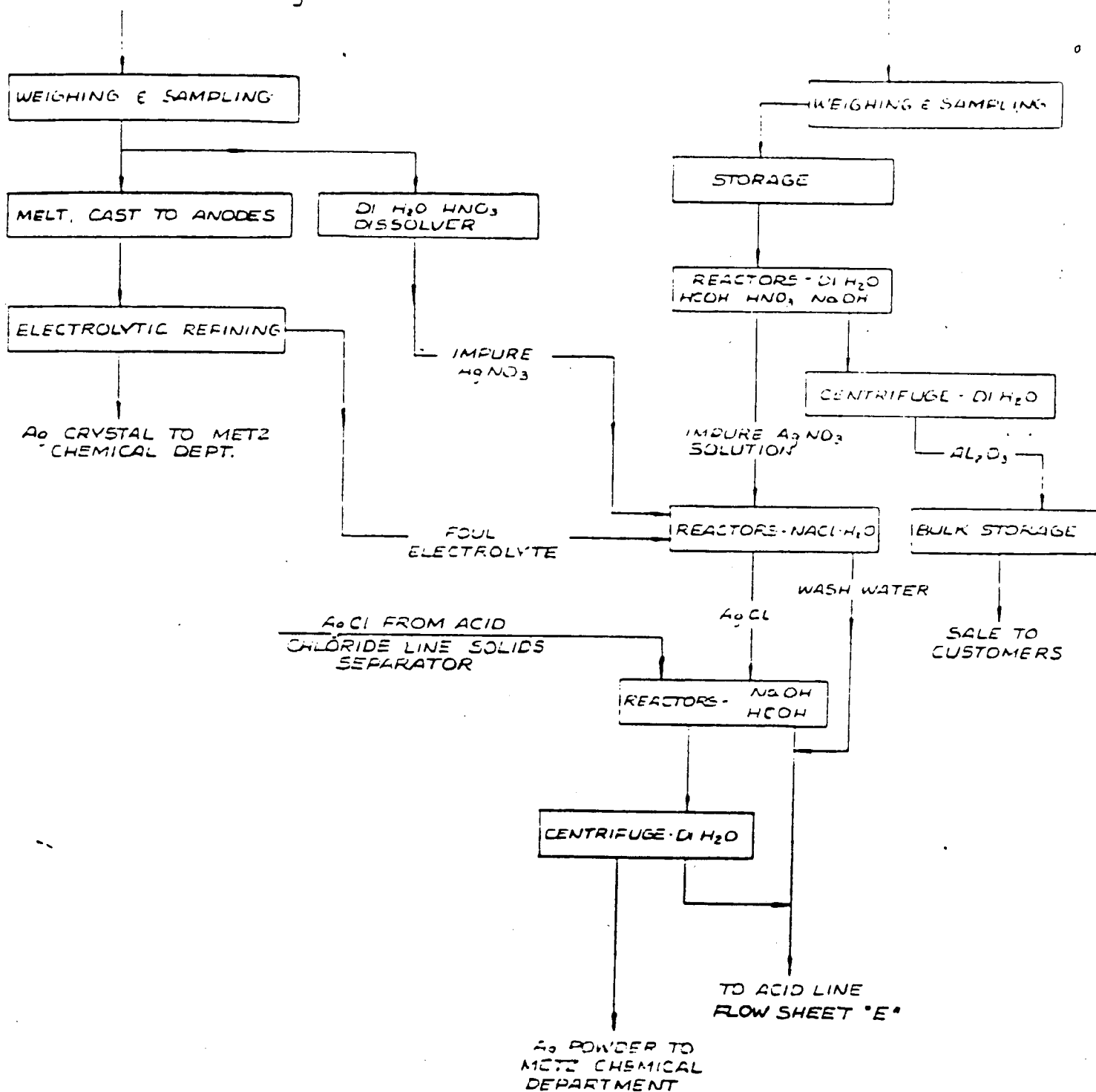
METZ REFINED MATERIAL ————— NEW OUTSIDE MATERIAL



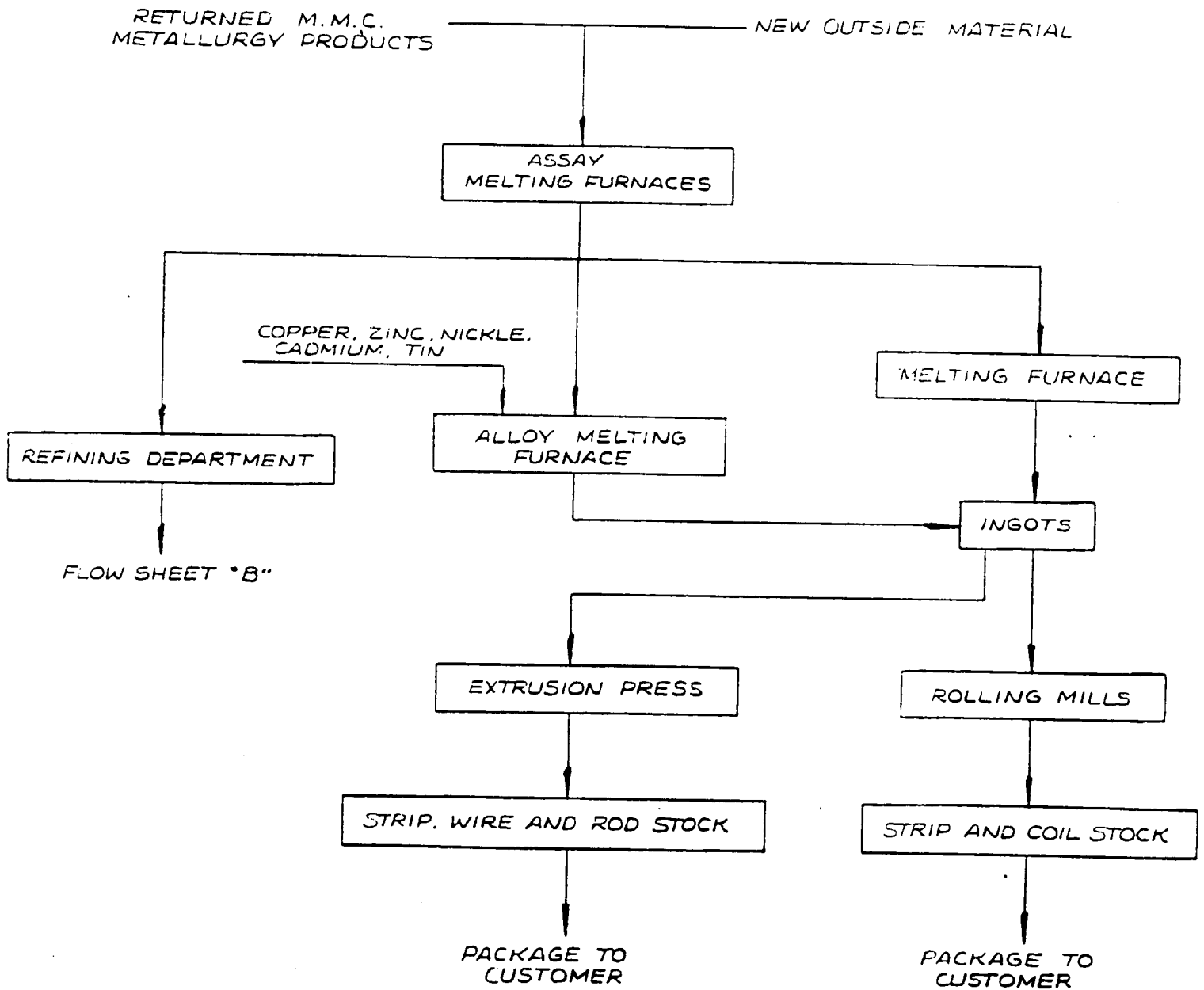
REFINING DEPARTMENT - FLOW SHEET "B"

METZ INTERNAL SCRAP  
CUSTOMER SCRAP  
PURCHASED IMPURE Ag

SPENT Ag BEARING CATALYST  
ON  $H_2C_3$



# METALLURGY DEPARTMENT- FLOW SHEET "C"



# GENERATOR INSPECTION CHECKLIST

		YES	NO	N/A
7:26-8.5	<u>Hazardous waste determination</u>			
	(a) Did the generator test its waste to determine whether it is hazardous?		X	
	Is the waste hazardous?	X		
	Is the generator determining that its waste exhibits a hazardous waste characteristic(s) based on its knowledge of the material(s) or processes used?	X		
	Has hazardous waste been shipped off site since November 19, 1980?	X		
	If yes, how many shipments, off site, have been made and describe the approximate size of an average shipment made on a monthly basis. If facility is a small quantity generator, please explain.			
	<i>since 10/1/80 Nety has shipped 8 manifested shipments offsite 4 in 1981, none in 1982, 3 in 1983 and 1 in 1984. All except 1 were drummed shipments and most drummed shipments were small volume (5 drums). 1 Bulk shipment was made</i>			
7:26-7.4(a)1	Does the generator have an EPA ID #?	X		
7:26-7.4(a)4	Does each manifest have the following information? Please circle the elements missing and obtain a copy of the incomplete manifests. (List those manifests that are deficient)	X		
7:26-7.4(a)4i	The generator's name, address and phone number?			
7:26-7.4(a)4ii	The generator's EPA ID number?			
7:26-7.4(a)4iii	The transporter(s) name, address and phone number?			
7:26-7.4(a)4iv	The transporter(s) EPA ID number?			
7:26-7.4(a)4v	The name, address and phone number of the designated TSD facility?			
7:26-7.4(a)4vi	The TSDF's EPA ID number?			
7:26-7.4(a)4vii	The name, type and quantity of hazardous waste being shipped, including such particulars as may be required regarding same?	7		

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-7.4(a)4viii	Special handling instructions and any other information required on the form to be shipped by the generator?	<u>X</u>	<u>      </u>	<u>      </u>
7:26-7.4(a)5	Before allowing the manifested waste to leave the generator's property, did the generator:	<u>      </u>	<u>      </u>	<u>      </u>
7:26-7.4(a)5i	Sign the manifest certification by hand?	<u>      </u>	<u>      </u>	<u>      </u>
7:26-7.4(a)5ii	Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest?	<u>      </u>	<u>      </u>	<u>      </u>
7:26-7.4(a)5iii	Retain one copy and forward one copy to the state of origin and one copy to the state of destination?	<u>      </u>	<u>      </u>	<u>      </u>
7:26-7.4(a)5iv	Give remaining copies of the manifest form to the transporter?	<u>      </u>	<u>      </u>	<u>      </u>
7:26-7.4(f)1	Has the generator maintained facility records since November 19, 1980? (Manifest(s), exception report(s) and waste analysis)	<u>      </u>	<u>      </u>	<u>      </u>
7:26-7.4(h)1	Has the generator received signed copies of portion B (from the TSD facility) of all manifests for waste shipped off site more than 35 days ago?	<u>  X  </u>	<u>      </u>	<u>      </u>
7:26-7.4(h)2	If not,	<u>      </u>	<u>      </u>	<u>      </u>
	1. Did the generator contact the hauler and/or the owner or operator of the TSDF and the NJDEP at 609-292-9877 to inform the NJDEP of the situation, and	<u>      </u>	<u>      </u>	<u>      </u>
	2. Have exception reports been submitted to the Department covering any of these shipments made more than 45 days ago?	<u>      </u>	<u>      </u>	<u>      </u>
	Before transporting or offering hazardous waste for transportation off site, does the generator?	<u>      </u>	<u>      </u>	<u>      </u>
7:26-7.2(a)	Conspicuously label appropriate manifest numbers on all hazardous waste containers that are intended for shipment?	<u>  X  </u>	<u>      </u>	<u>      </u>
7:26-7.2(b)	Insure that all containers used to transport hazardous waste off site are in conformance with applicable DOT regulations (i.e., 49 CFR 171 - 49 CFR 179)?	<u>  X  </u>	<u>      </u>	<u>      </u>



YES   NO   N/A

7:26-9.3

Accumulation time

How is waste accumulated on site?

- ☒ Containers
- ☐ Tanks (complete HWMF checklist)
  - ☐ Aboveground   ☐ Below ground
- ☐ Surface impoundments (complete HWMF checklist)
- ☐ Piles (complete HWMF checklist)

7:26-9.3(a)3

Is each container clearly dated with each period of accumulation so as to be visible for inspection?

X            
     X     

Is waste accumulated for more than 90 days?

If yes, complete HWMF checklist.

STOP HERE IF THE HAZARDOUS WASTE MANAGEMENT FACILITY (TSD) CHECKLIST IS FILLED OUT.

SHORT TERM ACCUMULATION STANDARDS (FOR GENERATORS WHO ACCUMULATE WASTE IN CONTAINERS FOR 90 DAYS OR LESS)

YES NO N/A

7:26-9.4

Containers

What type of containers are used for storage. Describe the size, type and quantity and nature of waste (e.g., 12 fifty five gallon drums of waste acetone).

*55 gallon steel drums of waste oils - approx 26  
from - 1  
P.B. - 3*

7:26-9.4(d)3

Do the containers appear to be in good condition, not in danger of leaking?

X — —

If no, please describe the type, condition and number of leaking or corroded containers. Be detailed and specific.

7:26-9.4(d)4i

Are all containers securely closed except those in use? *Some external drums had no bung*

— X —

7:26-9.4(d)4iii

Do containers appear to be properly handled or stored in a manner which will minimize the risk of the container rupturing or leaking?

— X — *as indicated by oil spillage in the ground*

7:26-9.4(d)4iv

Are containerized hazardous waste segregated in storage by waste type?

X — —

7:26-9.4(d)4v

Is every container arranged so that its identification label is visible?

X — —

7:26-9.4(d)5

Is the storage area inspected at least daily?

X — —

7:26-9.4(d)6

Are containers holding ignitable and reactive wastes located at least 50 feet (15 meters) from the facility's property line?

X — —

7:26-11.2

Tanks

What are the approximate number and size of tanks containing hazardous waste?

— — —

Identify the waste treated/stored in each tank.

*Mety cleaned up some of this spillage by the time I returned on 4/28 but I told them that more work needed to be done on digging up contaminated soils.*

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
	<u>General Operating Requirements</u>			
7:26-11.2(a)2	Are the tanks maintained so that there is no evidence of past, present, or risk of future leaks?	—	—	X
	If no, please explain.			
	Are there leaking tanks?	—	—	—
7:26-11.2(a)2	Are all hazardous wastes or treatment reagents being placed in tanks compatible with the tank material so that there is no danger of ruptures, corrosion, leaks or other failures?	—	—	—
7:26-11.2(3)	Do uncovered tanks have at least 2 feet of freeboard or an adequate containment structure?	—	—	—
7:26-11.2(a)4	If waste is continuously fed into a tank, is the tank equipped with a means to stop the inflow from the tank, e.g., bypass system to a standby tank?	—	—	—
7:26-11.2(c)	<u>Inspections</u>			
	Is the tank(s) inspected each operating day for:			
	1. Discharge control equipment	—	—	—
	2. Monitoring equipment	—	—	—
	3. Level of waste in tank	—	—	—
	4. Construction of materials of the tank	—	—	—
	5. Are the tanks and surrounding areas (e.g., dike) inspected weekly for leaks, corrosion or other failures?	—	—	—
	Are there underground tanks?	—	—	—
	If yes, how many and can they be entered for inspection?	—	—	—
7:26-11.2(e)	Are ignitable or reactive wastes stored in a manner which protects them from a source of ignition or reaction?	—	—	↓
	If no, please explain.			

		YES	NO	N/A
7:26-11.2(f)	Does it appear that incompatible wastes are being stored separate from each other?	—	—	X
7:26-9.4(g)	<u>Personnel training</u>			
	Have facility personnel successfully completed a program of classroom instruction or on-the-job training within 6 months of having been employed?	—	X	—
7:26-9.4(g)2	Is the program directed by a person trained in hazardous waste management procedures and does it include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed?	—	—	—
7:26-9.4(g)5	If yes, have facility personnel taken part in an annual review of training?	—	—	—
	Is there written documentation of the following:	—	—	—
7:26-9.4(g)6i	Job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job?	—	—	—
7:26-9.4(g)6ii	A written job description for each position related to hazardous waste management?	—	—	—
7:26-9.4(g)6iii	A written description of the type and amount of both introductory and continuing training given to personnel in jobs related to hazardous waste management?	—	—	—
7:26-9.4(g)6iv	Documentation of actual training or experience received by personnel?	—	—	—
7:26-9.4(g)7	Are training records kept on all employees for at least 3 years?	—	—	—
7:26-9.4(g)8	Are semi-annual drills conducted involving all employees and appropriate local authorities to test emergency response capabilities at the facility in accordance with the contingency plan and emergency procedures development pursuant to NJAC 7:26-9.7?	—	V	—
7:26-9.6	<u>Preparedness and prevention</u>			
	Does the facility comply with preparedness and prevention requirements including maintaining:			

		YES	NO	N/A
7:26-9.6(b)1	An internal communications or alarm system?	<u>X</u>	—	—
7:26-9.6(b)2	A telephone or other device to summon emergency assistance from local authorities?	<u>X</u>	—	—
7:26-9.6(b)3	Portable fire equipment, spill control equipment, and decontamination equipment?	<u>X</u>	—	—
7:26-9.6(b)4	Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems?	<u>X</u>	—	—
7:26-9.6(c)	Is equipment tested and maintained?	<u>X</u>	—	—
7:26-9.6(d)1	Is there immediate access to communications or alarm systems during handling of hazardous waste?	<u>X</u>	—	—
7:26-9.6(e)	Adequate aisle space to allow unobstructed movement of personnel fire protection equipment, spill control equipment and decontamination equipment?	—	<u>X</u>	—

If no, please explain.

*Drums are stored too close together for equipment to be used effectively*

In your opinion, do the types of waste on site require all of the above procedures, or are some not required?

X — —

Explain.

7:26-9.6(f) Has the facility made the following arrangements, as appropriate for the type of waste handled on site:

7:26-9.6(f)1 Familiarize police, fire departments and emergency response teams with the layout of the facility and hazardous waste handled?

— — —  
— X —

7:26-9.6(f)2 Where more than one police and fire department might respond to an emergency, is there an agreement designating primary emergency authority to a specific police or fire department, and agreements with any others to provide support to the primary emergency authority?

— — X

*Also a B*

		YES	NO	N/A
7:26-9.6(f)3	Agreements with emergency response contractors, and equipment suppliers?	—	X	—
7:26-9.6(f)4	Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or discharges at the facility?	—	X	—
7:26-9.6(f)5	Arrangements with local fire departments to inspect the facility on a regular basis with at least two (2) inspections annually?	—	X	—
7:26-9.7	<u>Contingency plan and emergency procedures</u>			
7:26-9.7(a)	Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosions, hazards to human health or environment, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water?	—	X	—
7:26-9.7(b)	Are provisions of the plan carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment?	—	1	—
7:26-9.7(c)	Does the contingency plan describe the actions facility personnel shall take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility?	—	—	—
7:26-9.7(d)	Did the owner or operator prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with 40 CFR 112 or 151 or a Discharge Prevention, Containment and Countermeasure (DPCC) Plan in accordance with N.J.A.C. 7:1E-4.1 <u>et seq.</u> ?	—	—	—
	If yes, did the owner or operator amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this section?	—	1	—
7:26-9.7(e)	Does the plan describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services?	—	X	—

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-9.7(f)	Does the plan list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator and is this list kept up to date? Where more than one person is listed, one shall be named as primary emergency coordinator and others shall be listed in the order in which they will assume responsibility as alternates.	—	<u>X</u>	—
7:26-9.7(g)	Does the plan include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required? Is the list kept up-to-date? In addition, does the plan include the location and a physical description of each item on the list, and a brief outline of its capabilities?	—	<u>1</u>	—
7:26-9.7(h)	Does the plan include an evacuation procedure for facility personnel where there is a possibility that evacuation could be necessary? Does this plan describe signal(s) to be used to begin evacuation, evacuation routes, and alternative evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires)?	—	—	—
7:26-9.7(i)	Is a copy of the contingency plan and all revisions to the plan:  1. Maintained at the facility; and  2. Has the contingency plan been submitted to local authorities (police fire departments, emergency response teams)?	—	—	—
		—	<u>✓</u>	—

11/21/84 METYAKLINGBET (USA)

4/26 and 27/84

ACR/ INSPECTION

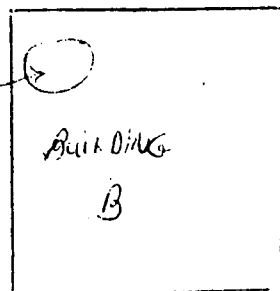
Steve Carfagna

SUMMIT 1800 BULK  
FILLED 70

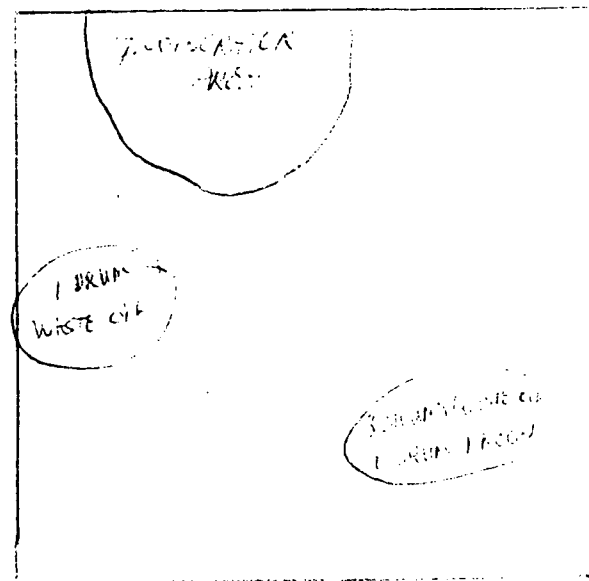
DRUMS OF  
USED HERBAGE  
SOME SPILLAGE

DRUM 22  
DRUMS TO 45% CIL  
SOME  
SPILLAGE

3 DRUMS  
WASTE PCBs



# 3950



# 3900

Steve Carfagna



REFERENCE NO. 18

12-22-04

page 1

NOTICE OF VIOLATION

ID NO. 1130 002115303 DATE FRI JAN 4/27/04  
NAME OF FACILITY METZ METALURGICAL CORPORATION  
LOCATION OF FACILITY 3900 SOUTH CLINTON AVENUE SOUTH PLAINFIELD NJ 07080  
NAME OF OPERATOR \_\_\_\_\_

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION ① NJAC 7:26-9.4(g) - No training program for facility personnel ② NJAC 7:26-9.6 (F) 1 - ~~No~~ Need to have solid waste kept about 1000 feet away from the handling - ~~points~~ - ~~to~~ ~~be~~ ~~kept~~ ~~at~~ ~~least~~ ~~1000~~ ~~feet~~ ~~from~~ ~~the~~ ~~handling~~ ~~points~~ ~~etc.~~  
③ - 9.6(F) 4 - Need to make arrangements with local hospital  
④ - 9.6(F) 5 - Need to determine how often regularly the fire dept inspects the facility ⑤ - 9.7 - No contingency plan (cont.)

Remedial action to correct these violations must be initiated immediately and be completed by

See 2nd sheet . Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of \$25,000 per violation.

Stephen J. Carfagna  
Investigator, Division of Waste Management  
Department of Environmental Protection

# NOTICE OF VIOLATION

ID NO. 116-20-19500

DATE *7-24, 7/2/57*

NAME OF FACILITY *AE-1 AE-4 14604 1460900*

LOCATION OF FACILITY 3000 S. Santa Ana, 907 Brea, CA 92621

NAME OF OPERATOR \_\_\_\_\_

**You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.**

DESCRIPTION OF VIOLATION (NOTE 7.36-8.57 b) - Generator has  
wires connected and tested; must determine whether or not  
it is in compliance - not, and some of the waste oils in  
the generator. In Brown's dump the waste oil needs to be  
inspected - The dump is in good condition some had no  
leakage in the area and oil spillage on the ground.

**Remedial action to correct these violations must be initiated immediately and be completed by**

Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of \$25,000 per violation.

*Stephen J. Carroll*  
Investigator, Division of Waste Management  
Department of Environmental Protection

REFERENCE NO. 19



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF ENVIRONMENTAL QUALITY  
JOHN FITCH PLAZA, CN027, TRENTON, N.J. 08625

May 2, 1984

Mr. Noel Mazar  
Plant Engineer  
Metz Metallurgical Corp.  
3900 S. Clinton Avenue  
South Plainfield, New Jersey 07080

Dear Mr. Mazar:

This letter is to advise you that a Permit to Construct, Install or Alter Control Apparatus or Equipment and a Certificate to Operate Control Apparatus or Equipment has been approved by the Bureau of Engineering and Technology as follows:

Company Name: Metz Metallurgical Corp.

ID #15305

Plant Location: South Plainfield

Company Designation of Stack: Wheelabrator-Frye Baghouse #2

Approval Date: May 1, 1984

Tracking Number: 84-1122

Certificate Status: Permanent

You will be sent form VEM-017 at a later date. Form VEM-017 will include your New Jersey Plant ID Number, New Jersey Stack Number, and Permit/Certificate Number.

If you have any questions regarding this approval, please contact Mr. Pat Zigrand (609-984-3030) and refer to the Tracking Number above.

Very truly yours,

William F. Hart, Supervisor  
New Source Review Section  
Bureau of Engineering & Technology

WFH:djs  
cc: Pat Zigrand  
Central Regional Office

REFERENCE NO. 20

# Metz Metallurgical Corporation

12-22-04



3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N.J. 07080 / (201) 561-1100 / TWX: 710-997-9524

May 11, 1984

Mr. Stephen J. Carfora  
New Jersey Department of Environmental Protection  
Division of Waste Management  
120 Route 156  
Yardville, New Jersey 08620  
N.J. ID. #D002195303

Re: R.C.R.A. Violation dated 4/27/84

Dear Mr. Carfora:

In response to the above mentioned violation, we have done the following:

Item No. 1 N.J.A.C. 7:26 - 9.4 (g)

We are in the process of setting up an employee training program. This program will be implemented as soon as our contingency plan is finalized.

Item No. 2 N.J.A.C. 7:26 - 9.6 (f)

We will send a map of our facilities to the local police and fire departments showing where our hazardous wastes and flammable materials are stored. Along with the map, we are sending descriptions of our wastes and the hazards associated in the handling of them.

Item No. 3 N.J.A.C. 7:26 - 9.6 (f) 4

The local hospital will be informed of the potential emergency situation that could arise with the handling of our specific hazardous wastes. The local emergency clinic has been informed.

Item No. 4 N.J.A.C. 7:26 - 9.6 (f) 5

We presently have an annual fire inspection. We have had an initial meeting with the fire department to request a semi-annual inspection. The department is considering our request.

Item No. 5

A rough draft of the contingency plan has been written. As soon as it is finalized, it will be implemented.

# Metz Metallurgical Corporation

Item No. 6      N.J.A.C. 7:26 - 8.5 (b)

The waste oils that we generate are lubricating oils coming from gear boxes; machinery that is electrically or hydraulically driven, and hydraulic pump systems. There are no internal combustion engines at our facility. According to the New Jersey Department of Environmental Protection Waste Management Group, our waste oils are classified as X726.

Item No. 7

The drum storage area has been moved and the waste oil drums have been consolidated and readied for shipment.

Sincerely,

A handwritten signature in black ink, appearing to read "E. Peter Becker". The signature is fluid and cursive, with a large, sweeping "E" and "B".

E. Peter Becker  
Executive Vice President

EPB:amy



REFERENCE NO. 21

INVESTIGATIVE REPORT

Inspector: Steve Carfora <sup>SC</sup> Date: 5/24/84 Time In: 0955 DWM Incident  
Time Out: 1110 Report #: \_\_\_\_\_  
Company Name: Metz Metallurgical Corp. Telephone: (201) 561-1100  
EPA ID # \_\_\_\_\_ Property Owner: \_\_\_\_\_  
Street: 3900 South Clinton Avenue Address: \_\_\_\_\_  
Town: South Plainfield \_\_\_\_\_  
County: Middlesex \_\_\_\_\_  
Lot: \_\_\_\_\_ Block: \_\_\_\_\_  
Type Ownership: \_\_\_\_\_

Complaint: Followup on Field NOV issued at RCRA inspection.

Origin of  
Complaint: \_\_\_\_\_

Samples taken? ☐ YES  
☒ NO

Photos taken? ☐ YES  
☒ NO

Findings: On Thursday, 5/24/84, I performed a followup RCRA at Metz to followup on a field NOV I issued. I interviewed and toured the facility with Carmen DiMiglio, Process Engineer.

We reviewed the letter Metz sent me in response to the NOV. In that letter Metz informed DEP that it is in the process of putting together documents to get itself into compliance with the preparedness and prevention, contingency plan and emergency procedures, as well as the personnel training requirements as set forth at 9.3(a)4. I told Metz to send me a letter when it has accomplished this - I told them that it was not necessary to send me the actual documents.

I checked Metz' drum storage practices again and determined that the following wastes are onsite:

1. 1 full 55 gallon drum of "Dirty Freon" in the solvent degreaser area with a 3/30/84 accumulation start date on it. It was the drum that Baron-Blakeslee refused to take.
2. 3 full 55 gallon drums of waste oil contaminated with silver (Ag) stored in solvent degreaser area.
3. 3 drums of PCB waste. They have been onsite longer than 90 days but Metz is making arrangements to have the waste disposed of.

Incident Report #: \_\_\_\_\_

Subject: Freehold Cartage, Inc.

HW/EF # \_\_\_\_\_

Date: 5/24/84

Page 2 of 2

Findings and Summary:

4. 3 55 gallon drums of waste oil. Metz improved its storage practices since my last visit. They removed empty drums and consolidated small amounts from various drums into full drums. These drums are now marked "Used Oil", but have no labels. Metz has contacted Marisol about disposal of these drums. Metz is making the arrangements now and is filling out the necessary forms.

REFERENCE NO. 22

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WASTE MANAGEMENT  
BUREAU OF FIELD OPERATIONS

ENFORCEMENT REFERRAL

TO: Dave Stobbe & Karen Frew DATE: 6/6/84  
FROM: Steve Capone & Fred Bicker REGION: Central  
RE: Meth. Medicalurgical Corp. NJD 002195303 3900 S Clinton Ave, S Plainfield  
Lot 201 area 20 Block 46701 South Plainfield Middlesex  
3900 S. Clinton Ave South Plainfield NJ 07080 E. Peter Bicker VP  
Name of Facility ID Number Location Address  
Lot and Block Township County  
Mailing Address Responsible Party

The attached inspection/investigation report(s) dated 4/26 + 4/27/84 is being referred and it is recommended a NOV and PSO be issued for violations of:

- NJAC 7:26- 9.3(a)4 Meth. The generator, failed to comply with the  
requirements for owners and operators concerning  
preparedness and prevention, contingency plans and  
emergency procedures, and personnel training  
(for generators who accumulate hazardous waste 90  
days or less). Specifically 8  
- 9.4(g) - no training program  
- 9.6(F) 1 - Police + fire dept not notified  
- 9.6(F) 4 - NO arrangements made with hospitals  
- 9.6(F) 5 - Fire inspections not being done 2x/year  
Suggested penalty: Maximum allowed penalty  
→ - 9.7 - No contingency plan.
- NJSA 58:10- \_\_\_\_\_

ADDITIONAL COMMENTS:

Meth. was previously inspected by  
DEP on 2/16/83. At that time the  
same violations as noted above were found.  
~~Meth. was~~ At the time of my visit  
on 4/26 and 27/84 Meth. still had  
not complied. Therefore, I recommend  
the maximum penalty.

REVIEWED AND APPROVED BY:

Vince Kirsch 6-14-84

REFERENCE NO. 23



State of New Jersey  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WASTE MANAGEMENT  
120 Rt. 156, Yardville, N.J. 08620

DR. MARWAN M. SADAT, P.E.  
DIRECTOR

NOV 28 1984

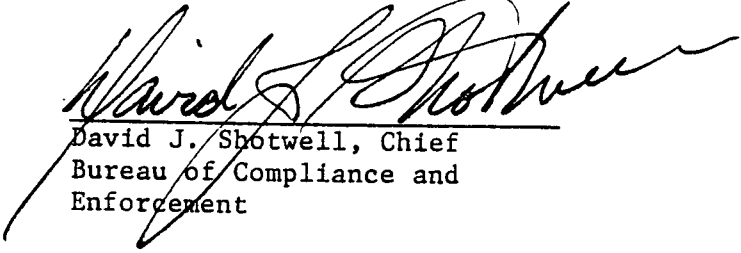
LINO F. PEREIRA  
DEPUTY DIRECTOR

MEMORANDUM

TO: Steve Madonna, DAG  
FROM: David J. Shotwell  
SUBJECT: Strike Force Coordination of Hazardous  
Waste Administrative Actions

The attached draft Order/Notice of Violation(s) is forwarded for your review. The Division of Waste Management intends to issue Order/NOV(s) within seven (7) working days from the date of this memorandum unless you request that the Order/NOV(s) be held.

If you wish to delay issuing the Order/NOV(s), please contact Ms. Joan McMahon at 292-3972. Please advise the undersigned, in writing, of any changes or action you require. Please copy Gerard Burke of the Office of Regulatory Services (DEP) on all correspondence.

  
David J. Shotwell, Chief  
Bureau of Compliance and  
Enforcement

F010:lmc

Attachment

cc George McCann, DWR

Gerard Burke, ORS

Ed. Londres, DWM

Company	Sub. Chap.	Order	NOV	PSO	ACO	Amount	Date Mailed	Status
Metz	9.3(a)4	X		X		\$700		
Metal-	9.4(g)							
lurgical	9.6(e)							
Corp.	9.6(f)1							
	9.6(f)4							
	9.6(f)5							
	9.7 et seq.							



State of New Jersey  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WASTE MANAGEMENT  
120 Rt. 156, Yardville, N.J. 08620

DR. MARWAN M. SADAT, P.E.  
DIRECTOR

LINO F. PEREIRA  
DEPUTY DIRECTOR

Mr. E. Peter Becker  
Executive Vice President  
Metz Metallurgical Corporation  
3900 S. Clinton Avenue  
South Plainfield, NJ 07080

Re: Penalty Settlement Offer

Dear Mr. Becker:

Attached is an Administrative Order concerning a violation of the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq and regulations promulgated thereunder, specifically N.J.A.C. 7:26-9.3(a)4, 9.4(g), 9.6(e), 9.6(f)1, 9.6(f)4, 9.6(f)5 and 9.7 et seq.

Pursuant to the terms of the Administrative Order, the violations must be corrected and the rules and regulations of this Department must be complied with by the specified date.

In addition, a penalty settlement offer of \$700 will be held open until to allow for an amicable resolution of this statutory claim for the referenced violation. Be advised that N.J.S.A. 13:1E-9c provides for a maximum civil penalty of \$25,000 per day for violations of this nature.

In the event of non-compliance with the Administrative Order and/or non-acceptance of this penalty settlement offer, this matter will be referred to the Office of the Attorney General for the initiation of litigation to enforce the Order and seek the full penalties allowed by law.

Should you wish to discuss the specifics for acceptable compliance with these directives, contact Mr. Barry Frasco at (609) 292-0967.



**DRAFT**

Be advised that such discussion will not automatically delay or otherwise extend the deadline for compliance with the Administrative Order.

Very truly yours,

Joseph A. Rogalski  
Assistant Director  
Field Operations, Compliance  
and Enforcement

F01:F024:1mc  
Attachments



**DRAFT**

**State of New Jersey**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**DIVISION OF WASTE MANAGEMENT**  
120 Rt. 156, Yardville, N.J. 08620

DR. MARWAN M. SADAT, P.E.  
DIRECTOR

LINO F. PEREIRA  
DEPUTY DIRECTOR

(IN THE MATTER OF )  
(METZ METALLURGICAL CORPORATION)

ADMINISTRATIVE  
ORDER

The following FINDINGS are made and ORDER is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (Department) and duly delegated to the Assistant Director for Enforcement and Field Operations, Division of Waste Management, under the Solid Waste Management Act, N.J.S.A. 13:1E et seq.

FINDINGS

- 1) Metz Metallurgical Corporation (hereinafter "MMC") is operating as a generator of hazardous waste (EPA ID #NJDC002195303) and is located at 3900 South Clinton Avenue, Block 467.01, Lot 29.01, in South Plainfield Boro, Middlesex County, New Jersey.
- 2) Pursuant to N.J.A.C. 7:26-9.3(a), a generator may accumulate hazardous waste on-site without a permit for 90 days or less provided that:
  - a) All such waste is, within 90 days or less, shipped off-site to an authorized facility or placed in an on-site authorized facility, as defined by N.J.A.C. 7:26-1.4.
  - b) The waste is placed in containers which meet the standards of N.J.A.C. 7:26-7.2 and are managed in accordance with N.J.A.C. 7:26-9.4(d).
  - c) The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container.
  - d) The generator complies with the requirements for owners and operators of N.J.A.C. 7:26-9.6 and 9.7 concerning preparedness and prevention, contingency plans and emergency procedures as well as N.J.A.C. 7:26-9.4(g) concerning personnel training.

DRAFT

- 3) During the course of a routine Departmental inspection conducted on April 26th and April 27th, 1984 at the above referenced facility, the following violations were noted:

N.J.A.C. 7:26-9.3(a)4 - MMC failed to comply with generator requirements concerning preparedness and prevention, and contingency plans and emergency procedures.

N.J.A.C. 7:26-9.4(g) - MMC is in non-compliance with the requirements for personnel training.

N.J.A.C. 7:26-9.6(e) - MMC failed to maintain sufficient aisle space for movement of safety equipment within the hazardous waste storage area.

N.J.A.C. 7:26-9.6(f)1 - MMC failed to make arrangements to familiarize the police, fire departments, and emergency response teams with the facility.

N.J.A.C. 7:26-9.6(f)4 - MMC failed to make arrangements with local hospitals to familiarize them with the properties of the hazardous waste handled at the facility.

N.J.A.C. 7:26-9.6(f)5 - MMC failed to make arrangements with the local fire department to inspect the facility on a regular basis with at least two (2) inspections annually.

N.J.A.C. 7:26-9.7 et seq. - MMC failed to maintain a contingency plan at the facility.

#### ORDER

NOW, THEREFORE, IT IS HEREBY ORDERED that Metz Metallurgical Corporation, its principals, agents, employees, successors, assigns, tenants, and any receiver or trustee in bankruptcy, (should such an entity be appointed to take control of the facility which is the subject of this Order) shall:

- 4) Immediately comply with N.J.A.C. 7:26-9.3(a)4, specifically comply with generator requirements concerning preparedness and prevention, contingency plans and emergency procedures.
- 5) Immediately comply with N.J.A.C. 7:26-9.4(g), specifically comply with the requirements for personnel training.
- 6) Immediately comply with N.J.A.C. 7:26-9.6(e), specifically, maintain sufficient aisle space for movement of safety equipment within the hazardous waste storage area.
- 7) Immediately comply with N.J.A.C. 7:26-9.6(f)1, specifically make arrangements to familiarize the police, fire departments, and emergency response teams with the facility.

**DRAFT**

- 8) Immediately comply with N.J.A.C. 7:26-9.6(f)4, specifically make arrangements with local hospitals to familiarize them with the properties of the hazardous waste handled at the facility.
- 9) Immediately comply with N.J.A.C. 7:26-9.6(f)5, specifically make arrangements with the local fire department to inspect the facility on a regular basis with at least two (2) inspections annually.
- 10) Immediately comply with N.J.A.C. 7:26-9.7 et seq., specifically maintain a contingency plan at the facility.
- 11) Within fifteen (15) calendar days of receipt of this ORDER submit an affidavit of compliance outlining the actions taken to comply with the regulations cited in paragraphs 4 through 10 of this ORDER to:

NJ Department of Environmental Protection  
Division of Waste Management  
Bureau of Compliance & Enforcement  
120 Route 156  
Yardville, NJ 08620  
Attention: Barry Frasco

BE ON NOTICE that the maximum civil penalty for violations of the Solid Waste Management Act on an ORDER issued pursuant thereto is \$25,000 per day.

\_\_\_\_\_  
Joseph A. Rogalski  
Assistant Director

F01:F024:lmc

REFERENCE NO. 24

12-22-04

DATE (DD/MM/YY) \_\_\_\_\_

IN THE RECORD ROOM

WITH APPENDICES (A1-D1)

VIOL. SUM. (HW ONLY)

COORDINATOR: PO DATE:     /     /     SUPERVISOR:     DATE:     /     /

**REFERENCE NO. 25**



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WASTE MANAGEMENT  
120 Rt. 156, Yardville, N.J. 08620

MARWAN M. SADAT, P.E.  
DIRECTOR

LINO E. PERI  
DEPUTY DIRECTOR

DEC 12 1984

Mr. E. Peter Becker  
Executive Vice President  
Metco Metallurgical Corporation  
3900 S. Clinton Avenue  
South Plainfield, NJ 07080

Re: Penalty Settlement Offer

Dear Mr. Becker:

Attached is an Administrative Order concerning a violation of the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq and regulations promulgated thereunder, specifically N.J.A.C. 7:26-9.3(a)4, 9.4(g), 9.6(e), 9.6(f)1, 9.6(f)4, 9.6(f)5 and 9.7 et seq.

Pursuant to the terms of the Administrative Order, the violations must be corrected and the rules and regulations of this Department must be complied with by the specified date.

In addition, a penalty settlement offer of \$700 will be held open until DEC 26 1984 to allow for an amicable resolution of this statutory claim for the referenced violation. Be advised that N.J.S.A. 13:1E-9c provides for a maximum civil penalty of \$25,000 per day for violations of this nature.

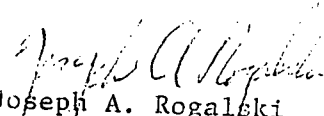
In the event of non-compliance with the Administrative Order and/or non-acceptance of this penalty settlement offer, this matter will be referred to the Office of the Attorney General for the initiation of litigation to enforce the Order and seek the full penalties allowed by law.

Should you wish to discuss the specifics for acceptable compliance with these directives, contact Mr. Barry Frasco at (609) 292-0967.

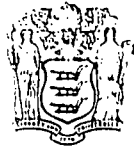


Be advised that such discussion will not automatically delay or otherwise extend the deadline for compliance with the Administrative Order.

Very truly yours,

  
Joseph A. Rogalski  
Assistant Director  
Field Operations, Compliance  
and Enforcement

F01:F024:Imc  
Attachments



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WASTE MANAGEMENT  
120 Rt. 156, Yardville, N.J. 08620

MARWAN M. SADAT, P.E.  
DIRECTOR

DEC 12 1984

LINO E. P. ...  
DEPUTY DIRECTOR

(IN THE MATTER OF )  
(METZ METALLURGICAL CORPORATION)

ADMINISTRATIVE  
ORDER

The following FINDINGS are made and ORDER is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (Department) and duly delegated to the Assistant Director for Enforcement and Field Operations, Division of Waste Management, under the Solid Waste Management Act, N.J.S.A. 13:1E et seq.

FINDINGS

- 1) Metz Metallurgical Corporation (hereinafter "MMC") is operating as a generator of hazardous waste (EPA ID #NJD002195303) and is located at 3900 South Clinton Avenue, Block 467.01, Lot 29.01, in South Plainfield Boro, Middlesex County, New Jersey.
- 2) Pursuant to N.J.A.C. 7:26-9.3(a), a generator may accumulate hazardous waste on-site without a permit for 90 days or less provided that the generator complies with the requirements for owners and operators of N.J.A.C. 7:26-9.6 and 9.7 concerning preparedness and prevention, contingency plans and emergency procedures as well as N.J.A.C. 7:26-9.4(g) concerning personnel training.
- 3) During the course of a routine Departmental inspection conducted on April 26th and April 27th, 1984 at the above referenced facility, the following violations were noted:

N.J.A.C. 7:26-9.3(a)4 and 9.4(g) - MMC is in non-compliance with the requirements for personnel training.

N.J.A.C. 7:26-9.3(a)4 and 9.6(e) - MMC failed to maintain sufficient aisle space for movement of safety equipment within the hazardous waste storage area.

N.J.A.C. 7:26-9.3(a)4 and 9.6(f)1 - MMC failed to make arrangements to familiarize the police, fire departments, and emergency response teams with the facility.

N.J.A.C. 7:26-9.3(a)4 and 9.6(f)4 - MMC failed to make arrangements with local hospitals to familiarize them with the properties of the hazardous waste handled at the facility.

N.J.A.C. 7:26-9.3(a)4 and 9.6(f)5 - MMC failed to make arrangements with the local fire department to inspect the facility on a regular basis with at least two (2) inspections annually.

N.J.A.C. 7:26-9.3(a)4 and 9.7 et seq. - MMC failed to maintain a contingency plan at the facility.

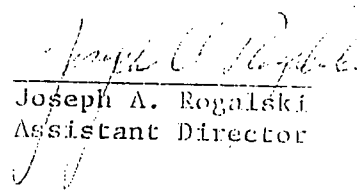
ORDER

NOW, THEREFORE, IT IS HEREBY ORDERED that Netz Metallurgical Corporation, its principals, agents, employees, successors, assigns, tenants, and any receiver or trustee in bankruptcy, (should such an entity be appointed to take control of the facility which is the subject of this Order) shall:

- 4) Immediately comply with N.J.A.C. 7:26-9.3(a)4, specifically comply with generator requirements concerning preparedness and prevention, contingency plans and emergency procedures.
- 5) Immediately comply with N.J.A.C. 7:26-9.4(g), specifically comply with the requirements for personnel training.
- 6) Immediately comply with N.J.A.C. 7:26-9.6(e), specifically, maintain sufficient aisle space for movement of safety equipment within the hazardous waste storage area.
- 7) Immediately comply with N.J.A.C. 7:26-9.6(f)1, specifically make arrangements to familiarize the police, fire departments, and emergency response teams with the facility.
- 8) Immediately comply with N.J.A.C. 7:26-9.6(f)4, specifically make arrangements with local hospitals to familiarize them with the properties of the hazardous waste handled at the facility.
- 9) Immediately comply with N.J.A.C. 7:26-9.6(f)5, specifically make arrangements with the local fire department to inspect the facility on a regular basis with at least two (2) inspections annually.
- 10) Immediately comply with N.J.A.C. 7:26-9.7 et seq., specifically maintain a contingency plan at the facility.
- 11) Within fifteen (15) calendar days of receipt of this ORDER submit an affidavit of compliance outlining the actions taken to comply with the regulations cited in paragraphs 4 through 10 of this ORDER to:

NJ Department of Environmental Protection  
Division of Waste Management  
Bureau of Compliance & Enforcement  
120 Route 156  
Yardville, NJ 08620  
Attention: Barry Frasco

BE ON NOTICE that the maximum civil penalty for violations of the Solid Waste Management Act on an ORDER issued pursuant thereto is \$25,000 per day.

  
Joseph A. Rogalski  
Assistant Director

F01:F074:Inc

REFERENCE NO. 26

# Metz Metallurgical Corporation



3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N.J. 07080 / (201) 561-1100 / TWX: 710-997-9524

December 20, 1984

Certified Mail - P05 3851600

Mr. Barry Frasco  
N. J. Department of Environmental Protection  
Division of Waste Management  
Bureau of Compliance and Enforcement  
120 Route 156  
Yardville, N.J. 08620

RE: Affidavit of Compliance concerning violations of  
Solid Waste Management Act

Dear Mr. Frasco:

Please find enclosed a check in the amount of \$700.00 for violations noted in a Departmental Inspection of Metz Metallurgical on April 26 and April 27, 1984.

In response to your administrative order which states that Metz Metallurgical shall:

- 4) Immediately comply with N.J.A.C. 7:26-9.3(a)4, specifically comply with generator requirements concerning preparedness and prevention, contingency plans and emergency procedures.
- 5) Immediately comply with N.J.A.C. 7:26-9.4(g), specifically comply with the requirements for personnel training.
- 6) Immediately comply with N.J.A.C. 7:26-9.6(e), specifically, maintain sufficient aisle space for movement of safety equipment within the hazardous waste storage area.
- 7) Immediately comply with N.J.A.C. 7:26-9.6(f)1, specifically make arrangements to familiarize the police, fire departments, and emergency response teams with the facility.
- 8) Immediately comply with N.J.A.C. 7:26-9.6(f)4, specifically make arrangements with local hospitals to familiarize them with the properties of the hazardous waste handled at the facility.

# Metz Metallurgical Corporation

N.J. Department of Environmental Protection  
December 20, 1984  
Page 2 of 3

- 9) Immediately comply with N.J.A.C. 7:26-9.6(f)5, specifically make arrangements with the local fire department to inspect the facility on a regular basis with at least two (2) inspections annually.
- 10) Immediately comply with N.J.A.C. 7:26-9.7 et seq., specifically maintain a contingency plan at the facility.

Metz Metallurgical Corporation has done the following:

- #4) Metz Metallurgical has complied with N.J.A.C. 7:26-9.3(a)4, requirements concerning preparedness and prevention, contingency plans and emergency procedures. A copy of the contingency plan is being forwarded to your central field office.
- #5) At this time, Metz Metallurgical is not in compliance with N.J.A.C. 7:26-9.4(g). We have begun implementation of a training program and plan to complete this with all personnel trained by February 28, 1985.
- #6) Metz Metallurgical has complied with N.J.A.C. 7:26-9.6(e) requirements concerning sufficient aisle space for movement of safety equipment within a hazardous waste storage area.
- #7) Metz Metallurgical has complied N.J.A.C. 7:26-9.6(f)1, by notifying the South Plainfield Fire and Police Departments of the properties of hazardous waste handled and associated hazards in dealing with fires and emergencies. Plant layouts have been sent to the South Plainfield Police and Fire Departments showing locations of: Hazardous Waste Storage, Personnel Exits and Road Access. A South Plainfield uniformed policeman is on duty all hours the plant is open.
- #8) Metz Metallurgical has complied with N.J.A.C. 7:26-9.6(f)4, by sending information about hazardous waste handled to the following hospitals and medical centers:
  - 1) Muhlenberg Hospital  
Plainfield, New Jersey
  - 2) Middlesex - Somerset Industrial Medical Center  
Piscataway, New Jersey
  - 3) Industrial Medical Center  
South Plainfield, New Jersey

# Metz Metallurgical Corporation

N.J. Departmental of Environmental Protection  
December 20, 1984  
Page 3 of 3


- #9) Metz Metallurgical is not in compliance with 7:26-9.6(f)5. We have asked our local fire department to inspect our facility semi-annually. They are a voluntary service and as such do not have the personnel. They therefore refused our request, but are considering semi-annual inspections. We currently have an annual fire inspection.
- #10) Metz Metallurgical has complied with 7:26-9.7 et seq by maintaining a contingency plan at the facility and distributing copies to the following agencies and health facilities:
- 1) South Plainfield Police Department  
South Plainfield, New Jersey
  - 2) South Plainfield Fire Department  
South Plainfield, New Jersey
  - 3) Muhlenberg Hospital  
Plainfield, New Jersey
  - 4) Middlesex - Somerset Industrial Medical Center  
Piscataway, New Jersey
  - 5) Industrial Medical Center  
South Plainfield, New Jersey

Metz Metallurgical therefore requests:


A variance from Item #9 and a 60 day grace period to allow compliance with Item #5. We very much want to comply with the Solid Waste Management Act and would welcome any help in reaching that goal.

Sincerely,

METZ METALLURGICAL CORPORATION

  
E. Peter Becker  
Executive Vice President

EPB:fjr

 Signature

A NOTARY PUBLIC OF NEW JERSEY  
My Commission Expires Dec. 18, 1988

Signature



REFERENCE NO. 27



for

State of New Jersey  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WASTE MANAGEMENT  
120 Rt. 156, Yardville, N.J. 08620

DR. MAIWAN M. SABAT, P.E.  
DIRECTOR

PROCESSED  
REPORTED

JAN 4 1985

Metz Metallurgical Corporation  
3900 South Clinton Avenue  
South Plainfield, NJ 07080

Attention: Mr. E. Peter Becker  
Executive Vice President

Re: Administrative Order and  
Penalty Settlement Offer  
(HW00538) Dated  
December 12, 1984

Dear Mr. Becker:

The Department acknowledges receipt of your letter dated December 20, 1984 (with the facility contingency plan and with your affidavit of compliance). The Department is currently reviewing your contingency plan. Upon completion of this review, the Department will inform you of any deficiencies in the plan.

With regard to the violation of N.J.A.C. 7:26-9.4(g), the Department hereby extends the compliance date until March 1, 1985. The Department requests upon completion of the employee training program that a letter be submitted to the Department indicating compliance with the applicable employee training regulations.

With regard to the violation of N.J.A.C. 7:26-9.4(f)5, the Department requests that a letter from the local fire department be submitted indicating their unwillingness to conduct semi-annual inspections of the facility.

In the event of non-compliance with the referenced Order, this matter will be referred to the Office of the Attorney General for the initiation of litigation to enforce the Order.

REFERENCE NO. 28

State of New Jersey  
Department of Environmental Protection

REFERRAL FORM

Date 3/4/85

TO

FROM

FRED SICKELD

BARRY FRASCO

SFO

BCE

TELEPHONE EXT. 2-5561

For Your ☐ ACTION ☐ APPROVAL ☒ INFORMATION ☐ REVIEW  
☐ COMMENTS ☐ SIGNATURE ☒ FILE

☐ Per Your Request  
☐ Please Return Attached Material  
☐ Please Prepare a Reply to be Signed By \_\_\_\_\_  
☐ The Attached Has My Approval  
☐ Please See Me

Remarks or Special Instructions

RE: METZ METALLURGICAL - S PLAINFIELD

ENCLOSED PLEASE FIND CORRESPONDENCE  
FROM METZ INDICATING COMPLIANCE WITH  
THE ADMINISTRATIVE ORDER. METZ  
HAS ALSO PAID THE PENALTY SETTLEMENT  
OFFER. PLEASE CALL ME IF YOU HAVE  
ANY QUESTIONS

THANKS

B...

The above information is a highlighted copy due to the poor quality of the copy on file with NUS.

# Metz Metallurgical Corporation



3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N.J. 07080 / (201) 561-1100 / TWX: 710-997-9524

RRR#: P 523 839 688

January 9, 1985

Mr. David J. Shotwell  
Chief, Bureau of Compliance and Enforcement  
New Jersey Department of Environmental Protection  
Division of Waste Management  
120 Route 156  
Yardville, New Jersey 08620

Re: Administrative order and penalty settlement offer (HW00588),  
dated December 12, 1984

Dear Mr. Shotwell:

With regard to the violation of N.J.A.C. 7:26-9.4(f)5, Metz Metallurgical has had further consultation with Captain Abbruzzese of the South Plainfield Volunteer Fire Department. Captain Abbruzzese has assured us that his department will inspect our facility semi-annually as required by N.J.A.C. 7:26-9.4(f)5

If you have any questions, please do not hesitate to call.

Sincerely,

METZ METALLURGICAL CORPORATION

  
E. Peter Becker  
Executive Vice President

EPB:ame

cc: Captain Abbruzzese, South Plainfield Volunteer Fire Department

# Metz Metallurgical Corporation

12-22-01

EST



1921

3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N.J. 07080 / (201) 561-1100 / TWX: 710-997-9524

Certified Mail Number: P 523 839 700

February 28, 1985

Mr. David J. Shotwell  
Chief, Bureau of Compliance and Enforcement  
New Jersey Department of Environmental Protection  
Division of Waste Management  
120 Route 156  
Yardville, NJ 08620

Re: Administrative order and penalty settlement offer (HW00588),  
dated December 12, 1984

Dear Mr. Shotwell:

With regard to the violation of N.J.A.C. 7:26-9.4(g), Metz Metallurgical has trained its employees as required by 7:26-9.4(g).

If you have any questions, please do not hesitate to call.

Sincerely,

METZ METALLURGICAL CORPORATION

E. Peter Becker  
Executive Vice President

EPB:ame

REFERENCE NO. 29

METZ METALLURGICAL COF C DIMEGL  
3500 SOUTH CLINTON AVE  
SOUTH PLAINFIELD NJ 07080

Western  
Union Mailgram®



4-032874S158 06/07/85 CS IPMMTZZ CSP TRNC  
2015611100 MGMB TDMT SOUTH PLAINFIELD NJ 62 06-07 0251P EST

► DUTY OFFICER  
N J DEPT OF ENVIRONMENTAL PROTECTION  
TWIN RIVERS PROFESSIONAL BLDG  
HIGHTSTOWN NJ 08520

GREETINGS CONFIRMING OUR TELEPHONE CONVERSATION WE HAD TODAY 6/7/85,  
AT 230PM OUR CONTRACTOR, EMERGENCY TECHNICAL SERVICE CORP, REMOVED A  
PARTIALLY FILLED FOUR LITER CONTAINER ON ANHYDROUS ETHER AND  
DETONATED IT ON OUR PROPERTY. THERE WERE NO COMPLICATIONS IF THERE  
ARE ANY QUESTIONS PLEASE CONTACT ME

CARMINE DIMEGLIO

1 458 EST

MG MCOMP MGM



REFERENCE 30

# Metz Metallurgical Corporation



3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N.J. 07080 / (201) 561-1100 / TWX: 710-997-9524

Certified Mail P 523 839 785

June 26, 1985

Dr. Richard Baker  
Chief of Permits Administration  
United States Environmental Protection Agency  
Region II  
26 Federal Plaza  
New York, NY 10278

RE: Notification of Recycling Activity Under 40 CFR 266.7 (b) (1)

Dear Dr. Baker:

January 1985 The Federal Government enacted new regulations which redefine Solid Wastes (40 CFR 261.2). Certain materials that are being recycled will now be considered Solid Wastes and if these materials are listed in 40 CFR 261.31, 40 CFR 261.32: or exhibit a Characteristic of a Hazardous Waste they now become Hazardous Wastes.

Metz Metallurgical Corporation reclaims precious metals from this new redefined Solid Waste Classification. Due to this activity we are required by 40 CFR 266.7 (b) (1) to notify The Federal E.P.A and State of New Jersey Department of Environmental Protection.

Please find the enclosed notification form. If there are any questions, please call me.

Sincerely,

METZ METALLURGICAL CORPORATION

Carmine DiMeglio  
Process Engineer

CD:cb

Enclosure

U.S. ENVIRONMENTAL PROTECTION AGENCY  
NOTIFICATION OF HAZARDOUS WASTE ACTIVITYINSTALLATION'S EPA  
I.D. NO.I. NAME OF IN-  
STALLATIONII. INSTALLA-  
TION  
MAILING  
ADDRESSIII. LOCATION  
OF INSTAL-  
LATION**FOR RECYCLING PURPOSES**

PLEASE PLACE LABEL IN THIS SPACE

**ONLY**

INSTRUCTIONS: If you received a preprinted label, affix it in the space at left. If any of the information on the label is incorrect, draw a line through it and supply the correct information in the appropriate section below. If the label is complete and correct, leave items I, II, and III below blank. If you did not receive a preprinted label, complete all items. "Installation" means a single site where hazardous waste is generated, treated, stored and/or disposed of, or a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested herein is required by law (Section 3010 of the Resource Conservation and Recovery Act).

## FOR OFFICIAL USE ONLY

## COMMENTS

INSTALLATION'S EPA I.D. NUMBER	APPROVED	DATE RECEIVED (yr., mo., & day)
FWJD0002195303		

## I. NAME OF INSTALLATION

METZ METALLURGICAL CORPORATION

## II. INSTALLATION MAILING ADDRESS

## STREET OR P.O. BOX

33900 SOUTH CLINTON AVENUE

## CITY OR TOWN

SOUTH PLAINFIELD

## ST.

## ZIP CODE

NJ 07080

## III. LOCATION OF INSTALLATION

## STREET OR ROUTE NUMBER

5 SAME

## CITY OR TOWN

## ST.

## ZIP CODE

## IV. INSTALLATION CONTACT

## NAME AND TITLE (last, first, &amp; job title)

DIMEGLIO CARMINA PROCESS ENG

## PHONE NO. (area code &amp; no.)

207-561-1100

## V. OWNERSHIP

## A. NAME OF INSTALLATION'S LEGAL OWNER

8 METZ METALLURGICAL CORPORATION

B. TYPE OF OWNERSHIP  
(enter the appropriate letter into box)F - FEDERAL  
M - NON-FEDERAL

M

## VI. TYPE OF HAZARDOUS WASTE ACTIVITY (enter "X" in the appropriate box(es))

☐ A. GENERATION☐ B. TRANSPORTATION (complete item VII)☒ C. TREAT/STORE/DISPOSE**FOR RECYCLING PURPOSES ONLY**

## VII. MODE OF TRANSPORTATION (transporters only - enter "X" in the appropriate box(es))

☐ A. AIR☐ B. RAIL☐ C. HIGHWAY☐ D. WATER☐ E. OTHER (specify):

## VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your Installation's EPA I.D. Number in the space provided below.

☐ A. FIRST NOTIFICATION☒ B. SUBSEQUENT NOTIFICATION (complete item C)

## C. INSTALLATION'S EPA I.D. NO.

FWJD0002195303

REFERENCE 31

## INCIDENT NOTIFICATION REPORT

☐ TRENTON DISPATCH ☒ DIV. OF WASTE MANAGEMENT ☐ DIV. OF ENVIR. QUALITY ☐ DIV. OF WATER RESOURCES  
☐ HQ FIELD OFFICE: ☐ NORTHERN ☐ METRO ☒ CENTRAL ☐ SOUTHERN

DATE 08-16-85 TIME (Military) 0200 REC'D BY E2000 PHONE NO. 426-0000

INCIDENT REPORTED BY: CASE NO. 85-08-220-19

NAME Officer Robert Meckler PHONE 201-755-0700

STREET \_\_\_\_\_

CITY S Plainfield STATE NJ

AFFILIATION S Plainfield Police

## NATURE OF INCIDENT:

EMERGENCY: ☒ FIRE ☐ EXPLOSION ☐ DRUMS ☐ SPILL ☐ DERAILMENT ☐ MVA  
COMPLAINT: ☒ SMOKE ☐ ODORS ☐ DUST ☐ SEWAGE ☐ NUISANCE ☐ ILLEGAL DUMPING  
OTHER: ☒

## INCIDENT LOCATION:

NAME (Site) Metz ~~metals~~ <sup>mercuric</sup> ☐ UNK PHONE \_\_\_\_\_

STREET 3900 S. Clinton Ave

CITY S. Plainfield COUNTY Middlesex STATE NJ ZIP CODE \_\_\_\_\_

STATUS AT SCENE OF INCIDENT: Recovery from fire

DATE OF INCIDENT: 08-11-85 TIME: 1121

ANYONE HOSPITALIZED ☒ YES ☐ NO  
AREA EVACUATED ☐ YES ☐ NO  
CONTAMINATION OF ☒ AIR ☒ LAND ☐ WATER  
PUBLIC EXPOSURE ☒ YES ☐ NO  
RECEIVING WATER \_\_\_\_\_ POTABLE WATER SOURCE ☐ YES ☐ NO  
WIND DIRECTION \_\_\_\_\_ LOCATION TYPE ☐ CITY ☒ INDUSTRIAL ☐ RURAL

SOURCE OF INCIDENT/PROBLEM: ☐ KNOWN ☐ UNKNOWN

COMPANY NAME Suma PHONE \_\_\_\_\_

CONTACT \_\_\_\_\_ TITLE \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_ COUNTY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

IDENTITY OF SPILLED AND/OR DISCHARGED SUBSTANCE: ☐ KNOWN ☐ UNKNOWN

NAME OF SUBSTANCE HCl, Formaldehyde

AMT. \_\_\_\_\_ A/P/E \_\_\_\_\_ SUBSTANCE CONTAINED ☐ YES ☐ NO ☐ UNKNOWN

OFFICIALS NOTIFIED: (A-310) Rich Kozub

HEALTH DEPT.: PERSON Middlesex Co HD conducting inspection 8/12/85 201-390-6975 DATE 8/12/85

LOCAL MUNIC.: PERSON \_\_\_\_\_ PHONE \_\_\_\_\_ DATE \_\_\_\_\_

INCIDENT REFERRED TO: ☐ BFO ☐ BERC ☐ DCJ ☐ DWR ☐ F&G ☐ BAPC ☐ HD

1. PERSON Cypri P PHONE Follow up DATE 8/12/85

2. PERSON Referral to MCHD PHONE \_\_\_\_\_ DATE 9/19/85

## COMMENTS:

J. DePierro will respond. F.D. Chief Catone - at scene

Called Mike Tompkins

Fire on roof in scrubber - packed spray tower (air control device) Report will follow - See attached

CALL BACK 8-28-85 SPOKE TO DENNIS MALINOWSKI - NEED TO TALK TO RCH CALL MONDAY  
COPIES: White - File Yellow - Trenton Dispatch Pink - DWM Enforcement  
CALLED AGAIN 9-16-85 LEFT MESSAGE FOR CALL BACK TUESDAY

85-08-10-1C		Page ____ of ____	
D.W.M. ASSIGNED CASE NUMBER 85-08-23-3C			
DATE 9-19-85	TIME 945	D.W.M. ID NO. 2174	

I have made repeated attempts to contact Mr Kozub, or anyone else in his office. Apparently no one else has any knowledge of either of these cases. I was first told that Mr Kozub was on vacation and now he is out sick. I left several messages with Miriam Frazer who recognized me when I called. Ms Frazer did say that she had given Mr Kozub my messages. I asked her to have Mr. Kozub contact Bruce Comfort directly.

OK R. Friedman

REFERENCE 32

Aug 12, 85 11:54 w

P.02

Form DEQ-004  
1/84

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF ENVIRONMENTAL QUALITY  
BUREAU OF EMERGENCY RESPONSE COORDINATION

# 08-85-96

EMERGENCY RESPONSE REPORT

J. DePierro, Chief

201-946-3439 (Home)

INCIDENT TYPE: (Check one)

☒ Air ☐ Radiation ☐ Other  
☐ Water ☐ Pesticide

BERC OFFICE USE ONLY

This report reviewed by

J. DePierro  
Name

8-12-85

Date

NOTIFICATION INFORMATION

Person making notification:

TRENTON DISPATCH

(Name)

(Address)

609-292-7172

(Phone No.)

Notification time:

0145

(Military)

Date:

AUG 10, 1985

On-site time from:

0335

(Military)

To:

0455

(Military)

Total hours

1 1/2

Company Name:

METZ METALLURGICAL CORP. - BLDG A.

Incident Location:

3900 SO CLINTON AVE. SO. PLAINFIELD MIDDLESEX

(Street)

(Municipality)

(County)

INCIDENT INFORMATION

Start of Incident:

0115

(Military)

Duration:

4

(Hours)

Nature of Incident:

☒ Fire

☐ Spill

☐ Explosion

☐ Other

Name of Responder:

J. DEPIERRO, J. STRONG

Phone No.

292-0331 (609)

Contaminant(s) emitted:

HYDROGEN CHLORIDE, FORMALDEHYDE

(Chemical Name)

Nature of Contaminant(s):

☒ Corrosive

☐ Flammable

☐ Toxic

☒ Hazardous

☐ Radioactive

Type of Contamination:

☒ Air

☐ Water

☐ Land

METEOROLOGICAL INFORMATION

Weather Conditions:

CLEAR

Wind Speed

10  
(mph)

Direction

NE

(From)

Notes:



August 10, 1985

Incident #08-85-96

METZ METALLURGICAL CORP.  
3900 SO. CLINTON AVE  
SO. PLAINFIELD - MIDDLESEX CO.

EVENTS LOG:

01:48 hrs. - J. DePierro paged by Trenton Dispatch notifying of a fire at subject facility. Information indicated that Hydrogen Chloride and Formaldehyde were involved and eight persons injured.

J. DePierro requests that Trenton Dispatch notify USEPA, NJDOH, and NJSP of situation. In addition J. Strong be notified to conduct call back procedures since J. DePierro was nowhere near a telephone.

02:25 hrs. - J. DePierro responds to subject incident. Trenton Dispatch (TD) informs that twelve persons have now been injured and that Chief Cotone - So. Plainfield Fire Department is requesting a DEP response.

J. DePierro informs TD to notify the Duty Officers in the Division of Water Resources and Waste Management.

03:00 hrs. - J. DePierro while enroute is informed by Trenton Dispatch that subject fire is under control and nearly extinguished. Injured personnel were restricted to firefighters, no public exposure verified by fire department.

03:35 hrs. - J. DePierro arrives on scene. An interview is conducted with Chief Cotone, Ron Wastowski, and David Berry.

It was determined that subject facility was shut down at 17:30 hrs. on August 9, 1985. For some unknown reason a fire ignited near a packed spray tower - Air Pollution Control device at rear of subject facility. This control device serviced several acid reactors used in precious metals fabrications. The fire quickly spread since the equipment involved was constructed of fiberglass material.

Chief Cotone stated that several firefighters were hospitalized for smoke inhalation and an additional two firefighters were injured falling from a ladder.

A second interview was conducted with plant officials David Berry and Noel Mazar. No explanation as to the cause of the fire or what equipment was actually involved could be given.

An equipment inspection was conducted with Ron Wastowski; however due to fire damage details could not be ascertained.

- 2 -

August 10, 1985

A second equipment inspection was conducted with J. Strong and it was found that a large Hydrochloric Acid tank was severely fuming. Since all electrical power was turned off, the control device servicing subject acid tank was inoperative. Examination of this vapor cloud revealed a dissipation point of fifty feet (on subject plant property) however firefighters were given verbal warning to stay clear of the immediate area surrounding this tank.

Plant officials stated that a complete inspection would be made of the plant for damage assessment. In addition an equipment inspection by Middlesex County Health Department would be conducted on the following workday.

04:40 hrs. - A final conference was conducted with Chief Cotone and Middlesex County.

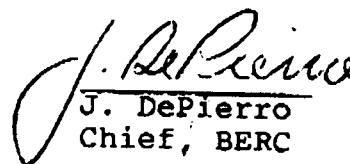
The emissions from subject fire scene had stablized with no emission escaping off subject property line.

Chief Cotone was informed if conditions worsened he could contact TD for assistance.

04:45 hrs. - J. DePierro and J. Strong depart from subject scene.

#### Recommendations

Follow up plant inspection be made by Central Regional Office and/or Middlesex County Health Department.

  
J. DePierro  
Chief, BERC

Incident: 08-85-96 - Metz Metallurgical Corp.

Responding Officers/Personnel

J. DePierro - NJDEP - DEQ (609-292-0331)  
J. Strong - NJDEP - DEQ (609-292-0331)  
R. Wastowski - Middlesex County H.D. (201-826-3100)  
Chief Cotone - So. Plainfield F.D. (201-756-4701)  
D. Berry - Metz Metallurgical (201-561-1100)  
N. Mazar - Metz Metallurgical (201-561-1100)

## GENERAL INFORMATION

Environmental Type: ☐ Urban ☐ Rural ☒ Industrial ☐ BusinessProximity of Residents: 1/4 - 1/2 MILEEffects of Contaminants: MINIMAL - ACID VAPORS REMAINED ON SUBJECT PROPERTY LINEAction being taken: FIRE EXTINGUISHED - EQUIPMENT INSPECTION CONDUCTED

Other Personnel on Site:

NAME

AFFILIATION

PHONE NO.

NOEL MAZARMETZ METALLURGICAL201-561-1100DAVID BERRY""" " "RON WASTOWSKIMIDDLESEX Co H.D.201-926-3100

## EQUIPMENT USED

☒ Two Way Radio☐ Compass☐ Telephone Manual☐ Protective Clothing☐ Binoculars☐ Radiological Survey Meter☐ Air Pak w/Tank☐ Ph Kit☐ Explosimeter (C.G.M.)☐ Gas Mask☐ Camera☐ Air Test Kit☐ First Aid Kit☒ Flashlight☐ Other \_\_\_\_\_☐ Wind Meter☐ Chemical Safety Lights

Service or New Supplies Needing Replacement \_\_\_\_\_

## SAMPLING INFORMATION

Type Taken: ☐ Air ☐ Water ☐ Soil ☐ Other \_\_\_\_\_

Time Taken: \_\_\_\_\_ Number Samples Taken \_\_\_\_\_

Notes: \_\_\_\_\_

Samples transferred to: \_\_\_\_\_

## CONCLUSIONS

Problems encountered: NONE

1 100

REFERENCE 33

**MEMO**

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

TO Health OfficerFROM Central Field Office, Division of Waste Management DATE Sept 19 1985SUBJECT Enclosed Case #85-8-1C-1C

As discussed in a phone conversation on *August 12, 1985*, the enclosed Incident is referred to your agency for necessary action.

As you are aware, the County Environmental Health Act empowers local health departments to enforce environmental regulations, namely N.J.S.A. 58:10-23.11, the Spill Compensation and Control Act, and N.J.S.A. 13:1E-1, the Solid Waste Management Act.

The Department hereby notifies you that it will take no further action in this matter, and the information is being supplied to you for review and any action you may deem necessary.

Should you have any questions concerning this matter, please feel free to contact this office at 609-292-5560.

Vincent S. Krisak, Supervisor  
Bureau of Field Operations

cc File  
Enclosure

INCIDENT REPORT

12/22/84

D.W.M. ASSIGNED CASE NUMBER		HOT LINE <input type="checkbox"/>		INDEXED <input type="checkbox"/>	
DATE		TIME (Military)		D.W.M. ID NO.	
12/16-12/17-12/18		120000		12112	

INCIDENT REPORTED BY:

NAME		PHONE	
CAROL D. METZ		(202) 561-1100	
AFFILIATION		CODE	
STREET			
CITY		STATE	ZIP CODE

INCIDENT LOCATION:

NAME		PHONE	
MISTIZ METTAMURGICAL CORP		(202) 561-1100	
STREET		DTM VERT	UTM HORIZ
3910A S. GUNTON AVE.			
CITY	COUNTY	STATE	ZIP CODE
S. PICALMFLUGA	12/1/84		

SOURCE OF SPILLED AND/OR DISCHARGED SUBSTANCE: Confirmed ☐ Alleged ☐ More Than 1 Source ☐

COMPANY NAME		PHONE	
CONTACT		TITLE	
STREET		DEP COMPANY NO.	
CITY	COUNTY	STATE	ZIP CODE

SUSPECTED SPILLED AND/OR DISCHARGED SUBSTANCE: Confirmed ☐ Alleged ☐ More Than 2 Substances ☐

1. 42 steel containers 1/4 to 1/3 full of R. H. 200			SUBSTANCE NO.
AMOUNT SPILLED	UNITS	A/P/E	S/L/G/M
2.			SUBSTANCE NO.
AMOUNT SPILLED	UNITS	A/P/E	S/L/G/M

DATE OF INCIDENT	TIME (Military)	TEMP.	WEATHER	WIND (Dir. & Vel.)
12-17-84	1200			
SPILL ORIGIN				CODE
CAUSE				CODE
WATER BODY AFFECTED				CODE
ASSOCIATED FIRE AND/OR HAZARDS				

INCIDENT REFERRED TO:

AGENCY	PHONE
CONTACT	AGENCY CODE

PRIMARY D.W.M. INVESTIGATOR	FOLLOW UP
NO FURTHER ACTION	Phong E2211
E2216	DATE
	06-11-185

COMMENTS:

- During investigation discovered rusted, bowed bottom container of other lot & may be crystallized. Metz hired Ethicon Technical Service Corp of Kansas, D.V. contract is for Guslach (202) 637-4420 who will dispose 6/2/85
- Metz has contacted local F.D., P.D., & H.D.
- Material may have to be exploded on site tomorrow.

D.W.M. ASSIGNED CASE NUMBER	85-06-06-04	Page	2 of 2
DATE	06-10-85	TIME	1510
		D.W.M. ID NO.	2211

I called Carmine DeMeglio - 4 liter container  
of ethyl ether. ETS determined that material  
could not be transported. Material was detonated  
on Nety property by ETS on 6/7/84. A  
mailgram confirming the disposal is due here  
today.



REFERENCE 34

**Metz**  
**Metallurgical**  
**Corporation**



3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N.J. 07080 / (201) 561-1100 / TWX: 710-997-9524

June 4, 1986

Mr. Valentin Kouame  
Environmental Engineer  
New Jersey Department of Environmental Protection  
Division of Water Resources  
Bureau of Industrial Waste Management  
CN-029  
Trenton, NJ 08625

RE: Telephone conversation on Monday, June 2, 1986.

Dear Mr. Kouame:

Herewith is a typical analysis of the filter cake collected in our Metal Recovery/Waste Water Treatment System. As you can see, the filter cake would be a characteristic hazardous waste because of the metals content. However, since this filter cake is recycled/reused, it is excluded from being regulated as a hazardous waste.

As I mentioned during our conversation, please send me a copy of any changes that have affected the N.J. Water Pollution Control Act since April, 1985. This would be of great assistance to me.

Thank you for your help, and if you have any further questions, please do not hesitate to call me.

Cordially,

METZ METALLURGICAL CORPORATION

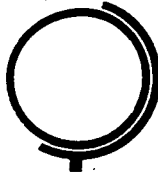
C. Scott Eves  
Manager Environmental Control  
and Metal Recovery Department

CSE:cmb

ANALYTICAL RESULTS OF FILTER CAKE

Arsenic	2.2 ppm
Barium	6.9 ppm
Cadmium	3306 ppm
Chromium	30.17 ppm
Lead	30.85 ppm
Mercury	0.03 ppm
Selenium	Not tested for
Silver	26.09%

REFERENCE 35



State of New Jersey  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WATER RESOURCES

CN 029

TRENTON, NEW JERSEY 08625

Water Quality Management

GEORGE G. McCANN, P.E.  
Acting Director

DIRK C. HOFMAN, P.E.  
DEPUTY DIRECTOR

Mr. C. Scott Eves, Manager  
Environmental Control & Metal Recovery Dept.  
Metz Metallurgical Corporation  
3900 South Clinton Avenue  
South Plainfield, New Jersey 07080

JUL 1 1986

RE: Determination of Non-RCRA/IWMF Status  
Metz Metallurgical Corporation  
EPA I.D. No. NJD 002 195 303  
Elementary Neutralization Unit Exclusion

Dear Mr. Eves:

This is in response to a memo to Mr. Paul Kurisko, Chief of the Bureau of Industrial Waste Management, received on April 18, 1984, from the Bureau of Hazardous Waste Engineering, concerning the classification of Metz Metallurgical Corporation as an Industrial Waste Management Facility (IWMF).

The "wastewater treatment unit", for which your company filed a RCRA Part A application as a treatment facility, has been determined to be under the scope of the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1.1 et seq. Your pretreatment facilities are classified as an Industrial Management Facility (IWMF) based upon the criteria contained in Subchapter 4 of the New Jersey Pollutant Discharge Elimination System (NJPDES) Regulations, N.J.A.C. 7:14A-1.1 et seq. Enclosed is an IWMF worksheet which shows the basis of our determination.

Our review indicates that your "wastewater treatment unit" also qualifies as an "elementary neutralization unit" as defined in 40 CFR 260.10 since it is used for neutralizing wastes which are hazardous wastes only because they exhibit the corrosivity characteristic. IWMFs are required to obtain individual NJPDES/SIU permits pursuant to N.J.A.C. 7:14A-10.5(a)(1)(ii).

However, IWMFs which are also classified as "elementary neutralization units" are excluded from the requirement to obtain an individual NJPDES/SIU permit. This exclusion applies provided the following requirements are satisfied:

- (1) there is no hazardous residue or sludge generated as a result of the treatment processes, and
- (2) the discharge to the local sewer complies with the State and Federal standard for pH (5.0 S.U. minimum) or with any more stringent standard as may be required by the local sewer use ordinance or regulations.

Any changes in your wastewater characteristics or in your "wastewater treatment unit" must be reported to this office within 30 days of when you are aware a change has or will occur. The NJDEP will determine if the changes will affect your classification as an "elementary neutralization unit".

This action does not relieve Metz Metallurgical Corporation of the responsibility for complying with the hazardous waste generation and accumulation requirements of the New Jersey Hazardous Waste Regulations, N.J.A.C. 7:26-1 et seq. for any other hazardous waste that may be generated on-site.

If there are any questions concerning this letter, please contact Valentin Kouame of my staff at (609) 292-4860.

Sincerely,



Kenneth Goldstein, P.E., Chief  
Industrial Pretreatment Section  
Bureau of Industrial Waste Management

WQM216:vk

Enclosure

cc: Frank Coolick - DWM  
Shirlee Schiffman - DWM  
Joel Golumbek - EPA

INDUSTRIAL WASTE MANAGEMENT FACILITY (IWMF) WORKSHEET

1. Name: METZ METALLURGICAL CORPORATION  
Mailing Address: 3900 S. CLINTON AVENUE S. PLAINFIELD, N.J. 07080  
Location Address: " " " " " "  
Facility Contact: SCOTT EVES  
Telephone No.: (201) 561-1100 RCRA ID No.: NJD 002 195 303  
Facility NJPDES No.: NJ0034835 Type: X DSW    DGW    SIU    None  
Receiving POTW, if any: MCUA POTW NJPDES No. NJ0020141
2. Description of Waste Source(s): GENERATED FROM THE CHEMICAL AND REFINING DEPARTMENTS.
3. The Waste Source is:  
X Intracompany/Intrastate    Intercompany/Intrastate
4. Operational Units comprising the treatment works (describe):  
Unit #1: TANK "A": PH ADJUSTMENT TO 5.5 - 9.0 BY ADDING  
Unit #2: SODIUM HYDROXIDE AND HYDROCHLORIC ACID.  
Unit #3:     
Unit #4:     
Unit #5:     
Unit #6:     
Unit #7:     
Unit #8:
5. Criteria (For each item indicate Yes, No, N/A, etc.):
- a. Is there an influent wastewater? YES  
Is it hazardous? YES  
If yes, list waste type. DO02
- b. Does the treatment works generate (G), store (S), or treat (T) a wastewater treatment sludge or residue? NO  
If yes, which units are involved, and what function do they perform? N/A  
Is it hazardous? N/A  
If yes, list waste type(s): N/A
- c. Is the unit a "tank" as per NJAC 7:14A-4.3? YES
6. Conclusions: Is the facility an IWMF? YES
7. Comments: THE FACILITY IS NOT A HAZARDOUS WASTE FACILITY (HWF) BECAUSE IT WILL STORE CONTAINERIZED HA  
THE FACILITY ALSO QUALIFIES AS AN "ELEMENTARY NEUTRALIZATION UNIT"

REFERENCE 36



# Metz Metallurgical Corporation



3900 SOUTH CLINTON AVENUE, SO. PLAINFIELD, N.J. 07080 / (201) 561-1100 / TWX: 710-997-9524

October 31, 1986

Mr. Ernest J. Kuhlwein Jr.  
New Jersey Department of Environmental Protection  
Division of Hazardous Waste Management  
Bureau of Hazardous Waste Engineering  
401 E. State Street  
Trenton, NJ 08625

Dear Mr. Kuhlwein:

We are currently a hazardous waste generator and our two waste streams consist of used gearbox lubricating oil and spent degreasing solvent. We generate approximately 25 gallons per week of used lubricating oil. We would like to burn the lubricating oil in an incinerator we have. The problem arises because the incinerator has a rated gross heat input of 4.5 million BTU/hour. All other criteria listed under N.J.A.C. 7:26-9(C)9 either are currently being adhered to or will be met if an exemption from the required rated gross heat input can be obtained.

Please tell me how to apply for an exemption from this requirement.

Thank you.

Cordially,

METZ METALLURGICAL CORPORATION

C. Scott Eves  
Manager Environmental Control  
and Metal Recovery Departments

CSE:cmh

REFERENCE 37



hndn  
T2cn

12-22-04

State of New Jersey  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF HAZARDOUS WASTE MANAGEMENT

John J. Trela, Ph.D., Acting Director

CN 028

Trenton, N.J. 08625

609 - 292 - 1250

16 DEC 1986

C. Scott Eves,  
Manager Env. Control & Metal Recovery Depts.

~~Metz Metallurgical Corporation~~

3900 South Clinton Avenue

~~Metz Metallurgical Corporation~~ 07080

Dear Mr. Eves:

RE: Request for Exemption from Requirements for Hazardous Waste Facilities, N.J.A.C. 7:26 Subchapter 9, for Operation of a Hazardous Waste Incinerator at Metz Metallurgical Corporation, So. Plainfield

The Bureau of Hazardous Waste Engineering (the Bureau) acknowledges receipt of your letter dated October 31, 1986 in which Metz requests exemption from N.J.A.C. 7:26-9(c)9iii and N.J.A.C. 7:26-12.1(b)7iii while burning hazardous waste in an incinerator whose gross heat input is stated at 4.5 million BTU/Hr.

The New Jersey Hazardous Waste Management Regulations describe in N.J.A.C. 7:26 Subchapters 9 and 12 the conditions under which a hazardous waste incinerator can be exempted from certain operating and permitting requirements by qualified operators. N.J.A.C. 7:26-9(c)9iii clearly states as one of the conditions that the standards and requirements of N.J.A.C. 7:26 subchapter 9 may not apply if the owner or operator is burning hazardous waste in a unit with rated gross heat input of at least 20 million British Thermal Units per hour (BTU/hr.). Since this is already an operating and permitting exemption made by the State, the Department can not make any further exception in case of Metz Metallurgical Corporation which would dilute the requirement N.J.A.C. 7:26-9(c)9iii and still allow hazardous waste generator status for the facility. Therefore, this Bureau, denies your request for exemption of Metz Metallurgical Corp. incinerator from permitting requirements under N.J.A.C. 7:26-12.1(a).

Please note, it is the facility's responsibility to operate within the conditions described above. To operate a hazardous waste facility without prior approval from the DEP is a violation of the Solid Waste Management Act N.J.S.A. 13:1E-et seq..

C. Scott Eves

-2-

16 DEC 1986

If you have any further questions, please feel free to contact Sunita Sharma at (609) 292-9880.

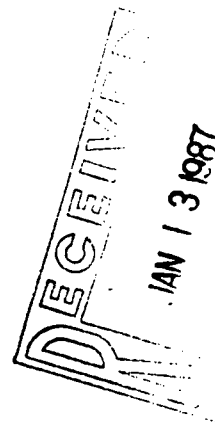
Very truly yours,

*Ernest J. Kuhlwein, Jr.*

Ernest J. Kuhlwein, Jr., Acting Chief  
Bureau of Hazardous Waste Engineering

EP60/sg

c: Angel Chang, USEPA



REFERENCE 38

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WASTE MANAGEMENTINSPECTION REPORT

## REPORT PREPARED FOR:

- ☒ Generator  
☐ Transporter  
☐ HWM (TSD) Facility

*RFA inspection*

## FACILITY INFORMATION

Name: Platz Pharmaceutical Corp  
Address: 3900 S. Clinton Ave  
S. Plainfield  
Lot: \_\_\_\_\_ Block: \_\_\_\_\_  
County: Meriden  
Phone: 301-561-1100  
EPA ID #: MSD002195303  
Date of Inspection: July 2, 1987

## PARTICIPATING PERSONNEL

State or EPA Personnel: Jennifer Hooper MSD/EPFacility Personnel: C. Scott Eves - Manager  
Environmental Control  
Motor Recovery DepartmentReport Prepared by Name: Jennifer HooperRegion: CentralTelephone #: 301-426-0700Reviewed by: Linda E. JonesDate of Review: 7-27-87

FACILITY NAME:

Platts Metal Recycling Corp

ADDRESS:

2000 ~~South~~ ~~Highway~~ ~~100~~ ~~West~~ ~~Highway~~ ~~100~~  
Springfield

TIME IN: \_\_\_\_\_

COUNTY:

Plummer

TIME OUT: \_\_\_\_\_

EPA ID :

MD902195303

DATE OF INSPECTION:

July 2, 1997

PHOTOS TAKEN

☐ YES

☒ NO

If yes, how many? \_\_\_\_\_

SAMPLE TAKEN

☐ YES

☒ NO

NO. OF SAMPLES \_\_\_\_\_

NJDEP ID # \_\_\_\_\_

MANIFESTS REVIEWED

☒ YES

☐ NO

Number of manifests in compliance all

Number of manifests not in compliance —

List manifest document numbers of those manifests not in compliance.

## SUMMARY OF FINDINGS

### FACILITY DESCRIPTION AND OPERATIONS

Metz Metallurgical is a <sup>industrial</sup> precious <sup>metals</sup> fabricator and refiner. Ninety-five percent (95%) of operations involves extracting silver from used catalyst from anti-freeze manufacturers. Metz uses chemicals to dissolve the catalyst and then the metal is precipitated out for recovery. Two products result from this process: silver and alumina oxide substrate. The substrate is sold to the same paper industry.

Metz has been ~~in~~ at this South Plainfield location since 1965 and employs 250 people. Operations are on weekdays only in 1 9 hour shift. There are two buildings ~~with~~ on adjacent properties owned by Metz; one for processing and the other for offices.

Raw materials (chemicals) shipped on site includes Nitric Acid, Hydrochloric Acid, liquid oxygen, liquid nitrogen sodium hydroxide and potassium hydroxide.

Metz deals with <sup>four</sup> waste haulers: Manual for waste oil, Eamon - Allied for grease (the TSD facility is Manual) ATEL for ketchup material and Safety Kleen for parts cleaner.



Describe the activities that result in the generation of hazardous waste.

managing gas box - lab oil  
safety mask - Safety Klean  
degreasing - open. floor

lab packs - bench waste <sup>lab</sup> 1 time / year

Identify the hazardous waste located on site, and estimate the approximate quantities of each.  
(Identify Waste Codes)

4 drums (fuel) waste oil 1 accum. drum  
2 drums acetone - Flammable D001 not normal  
waste stream

# GENERATOR INSPECTION CHECKLIST

		YES	NO	N/A
7:26-8.5	<u>Hazardous waste determination</u>			
	(a) Did the generator test its waste to determine whether it is hazardous?	—	✓	—
	Is the waste hazardous?	—	—	✓
7:26-8.5(b)2	Is the generator determining that its waste exhibits a hazardous waste characteristic(s) based on its knowledge of the material(s) or processes used?	✓	—	—
	Has hazardous waste been shipped off site since November 19, 1980?	✓	—	—
	If yes, how many shipments, off site, have been made and describe the approximate size of an average shipment made on a monthly basis. If facility is a small quantity generator, please explain.			
	~ 18 shipments / year (mostly Safety Kleen Mat.)			
7:26-7.4(a)1	Does the generator have an EPA ID #?	✓	—	—
7:26-7.4(a)4	Does each manifest have the following information? Please circle the elements missing and obtain a copy of the incomplete manifests. (List those manifests that are deficient)	✓	—	—
7:26-7.4(a)4i	The generator's name, address and phone number?	✓	—	—
7:26-7.4(a)4ii	The generator's EPA ID number?	✓	—	—
7:26-7.4(a)4iii	The transporter(s) name, address and phone number?	✓	—	—
7:26-7.4(a)4iv	The transporter(s) EPA ID number?	✓	—	—
7:26-7.4(a)4v	The name, address and phone number of the designated TSD facility?	✓	—	—
7:26-7.4(a)4vi	The TSDF's EPA ID number?	✓	—	—
7:26-7.4(a)4vii	The name, type and quantity of hazardous waste being shipped, including such particulars as may be required regarding same?	✓	—	—

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-7.4(a)4viii	Special handling instructions and any other information required on the form to be shipped by the generator?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-7.4(a)5	Before allowing the manifested waste to leave the generator's property, did the generator:			
7:26-7.4(a)5i	Sign the manifest certification by hand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-7.4(a)5ii	Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-7.4(a)5iii	Retain one copy and forward one copy to the state of origin and one copy to the state of destination?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-7.4(a)5iv	Give remaining copies of the manifest form to the transporter?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-7.4(f)1	Has the generator maintained facility records for three (3) years? (Manifest(s), exception report(s) and waste analysis)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-7.4(h)1	Has the generator received signed copies of portion B (from the TSD facility) of all manifests for waste shipped off site more than 35 days ago?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-7.4(h)2	If not:			
	1. Did the generator contact the hauler and/or the owner or operator of the TSDF and the NJDEP at 609-292-9877 to inform the NJDEP of the situation, and	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	2. Have exception reports been submitted to the Department covering any of these shipments made more than 45 days ago?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Before transporting or offering hazardous waste for transportation off site, does the generator?			
7:26-7.2(a)	Conspicuously label appropriate manifest numbers on all hazardous waste containers that are intended for shipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-7.2(b)	Insure that all containers used to transport hazardous waste off site are in conformance with applicable DOT regulations (i.e., 49 CFR 171 - 49 CFR 179)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

YES   NO   N/A

7:26-9.3

Accumulation time

How is waste accumulated on site?

- ☒ Containers *25 full* *30 full - 3-1-84*  
☐ Tanks (complete HWMF checklist)  
    ☐ Aboveground    ☐ Below ground  
☐ Surface impoundments (complete HWMF checklist)  
☐ Piles (complete HWMF checklist)

7:26-9.3(a)3

Is each container clearly dated with each period of accumulation so as to be visible for inspection?

  /              
       /       

7:26-9.3(a)1

Is waste accumulated for more than 90 days?

If yes, complete HWMF checklist.

STOP HERE IF THE HAZARDOUS WASTE MANAGEMENT FACILITY (TSD) CHECKLIST IS FILLED OUT.

SHORT TERM ACCUMULATION STANDARDS (FOR GENERATORS WHO ACCUMULATE WASTE IN CONTAINERS FOR 90 DAYS OR LESS)

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-9.4	<u>Containers</u> What type of containers are used for storage. Describe the size, type and quantity and nature of waste (e.g., 12 fifty five gallon drums of waste acetone).			
7:26-9.4(d)1i	Do the containers appear to be in good condition, not in danger of leaking?  If no, please describe the type, condition and number of leaking or corroded containers. Be detailed and specific.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(d)4i	Are all containers securely closed except those in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(d)4iii	Do containers appear to be properly handled or stored in a manner which will minimize the risk of the container rupturing or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(d)4iv	Are containerized hazardous waste segregated in storage by waste type?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(d)4v	Is every container arranged so that its identification label is visible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(d)5	Is the storage area inspected at least daily?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(d)6	Are containers holding ignitable and reactive wastes located at least 50 feet (15 meters) from the facility's property line?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-11.2	<u>Tanks</u>			
7:26-12.1(a)	Does the generator store hazardous waste in tanks?  If yes, what are the approximate number and size of tanks containing hazardous waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Identify the waste treated/stored in each tank.			

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
	<u>General Operating Requirements</u>			
7:26-11.2(a)2	Are the tanks maintained so that there is no evidence of past, present, or risk of future leaks?	---	---	---
	If no, please explain.			
	Are there leaking tanks?	---	---	---
7:26-11.2(a)2	Are all hazardous wastes or treatment reagents being placed in tanks compatible with the tank material so that there is no danger or ruptures, corrosion, leaks or other failures?	---	---	---
7:26-11.2(3)	Do uncovered tanks have at least 2 feet of freeboard or an adequate containment structure?	---	---	---
7:26-11.2(a)4	If waste is continuously fed into a tank, is the tank equipped with a means to stop the inflow from the tank, e.g., bypass system to a standby tank?	---	---	---
7:26-11.2(d)	<u>Inspections</u>			
	Is the tank(s) inspected each operating day for:			
	1. Discharge control equipment	---	---	---
	2. Monitoring equipment	---	---	---
	3. Level of waste in tank	---	---	---
	4. Construction of materials of the tank	---	---	---
	5. Are the tanks and surrounding areas (e.g., dike) inspected weekly for leaks, corrosion or other failures?	---	---	---
7:26-9.2(b)	Are there underground tanks used to store hazardous waste?	---	---	---
	If yes, how many and can they be entered for inspection?	---	---	---
7:26-11.2(e)	Are ignitable or reactive wastes stored in a manner which protects them from a source of ignition or reaction?	---	---	---
	If no, please explain.			

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-11.2(f)	Does it appear that incompatible wastes are being stored separate from each other?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(g)4	<u>Personnel training</u> Have facility personnel successfully completed a program of classroom instruction or on-the-job training since six months after the date of their employment or assignment to the facility or to a new position at the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(g)2	Is the program directed by a person trained in hazardous waste management procedures and does it include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(g)5	If yes, have facility personnel taken part in an annual review of the initial training?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is there written documentation of the following:			
7:26-9.4(g)6i	Job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(g)6ii	A written job description for each position related to hazardous waste management?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(g)6iii	A written description of the type and amount of both introductory and continuing training that has been and will be given to personnel in jobs related to hazardous waste management?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(g)6iv	Documentation of actual training or experience received by personnel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(g)7	Are training records kept on all current employees until closure of the facility and training records kept on former employees for three years from their last date of employment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.4(g)8	Are semi-annual drills conducted involving all employees and appropriate local authorities to test emergency response capabilities at the facility in accordance with the contingency plan and emergency procedures development pursuant to NJAC 7:26-9.7?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*has been working  
on many things  
currently has  
security problems - no  
drill was held*

YES   NO   N/A

7:26-9.6

Preparedness and prevention

Does the facility comply with preparedness  
and prevention requirements including  
maintaining:



		YES	NO	N/A
7:26-9.6(b)1	An internal communications or alarm system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.6(b)2	A telephone or other device to summon emergency assistance from local authorities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.6(b)3	Portable fire equipment, spill control equipment, and decontamination equipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.6(b)4	<i>1 1/2 inch fire hose, Specialty Dry 1540 GPM, 100' long</i> Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.6(c)	Is equipment tested and maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.6(d)1	Is there immediate access to communications or alarm systems during handling of hazardous waste?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.6(e)	Adequate aisle space to allow unobstructed movement of personnel fire protection equipment, spill control equipment and decontamination equipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If no, please explain.

In your opinion, do the types of waste on site require all of the above procedures, or are some not required?

Explain.

7:26-9.6(f)	Has the facility made the following arrangements, as appropriate for the type of waste handled on site:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.6(f)1	Familiarize police, fire departments and emergency response teams with the layout of the facility and hazardous waste handled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.6(f)2	Where more than one police and fire department might respond to an emergency, is there an agreement designating primary emergency authority to a specific police or fire department, and agreements with any others to provide support to the primary emergency authority?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*S. Blumenthal*

		YES	NO	N/A
7:26-9.6(f)3	Agreements with emergency response contractors, and equipment suppliers? <i>2752</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.6(f)4	Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or discharges at the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.6(f)5	Arrangements with local fire departments to inspect the facility on a regular basis with at least two (2) inspections annually?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.7	<u>Contingency plan and emergency procedures</u>			
7:26-9.7(a)	Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosions, hazards to human health or environment, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.7(b)	Are provisions of the plan carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7:26-9.7(c)	Does the contingency plan describe the actions facility personnel shall take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.7(d)	Did the owner or operator prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with 40 CFR 112 or 151 or a Discharge Prevention, Containment and Countermeasure (DPCC) Plan in accordance with N.J.A.C. 7:1E-4.1 <u>et seq.</u> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If yes, did the owner or operator amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this section?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7:26-9.7(e)	Does the plan describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-9.7(f)	Does the plan list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator and is this list kept up to date? Where more than one person is listed, one shall be named as primary emergency coordinator and others shall be listed in the order in which they will assume responsibility as alternates.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.7(g)	Does the plan include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required? Is the list kept up-to-date? In addition, does the plan include the location and a physical description of each item on the list, and a brief outline of its capabilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7:26-9.7(h)	Does the plan include an evacuation procedure for facility personnel where there is a possibility that evacuation could be necessary? Does this plan describe signal(s) to be used to begin evacuation, evacuation routes, and alternative evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:26-9.7(i)	Is a copy of the contingency plan and all revisions to the plan:			
	1. Maintained at the facility; and	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2. Has the contingency plan been submitted to local authorities (police fire departments, emergency response teams)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*process of changing to first summary drill*

# TRANSPORTER INSPECTION

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
	Does the transporter carry hazardous waste? If yes, explain.	_____	_____	_____
7:26-7.5(c)1	Has the transporter obtained a hazardous waste collector/hauler license from the NJDEP? License #:	_____	_____	_____
7:26-7.5(d)1	Does the transporter have an EPA identification number?	_____	_____	_____
7:26-3.4(h)	Do the vehicle(s) have the NJSWA registration number in letters and numbers at least three (3) inches in height?	_____	_____	_____
7:26-3.4(h)	Is the capacity of the vehicle marked on both sides of the vehicle in letters and numbers at least three (3) inches in height?	_____	_____	_____
7:26-3.4(h)	Is the current NJSWA registration certificate in the vehicle?	_____	_____	_____
7:26-3.2(b)	Does the license plate number and registration number on the certificate correspond to the vehicle's license plate number and the registration number displayed on the vehicle?	_____	_____	_____
7:26-7.5(d)18	Does the transporter have in each registered vehicle a current list of all federal and state agencies to be notified in the event of a discharge of hazardous waste during transportation?	_____	_____	_____
	How many vehicles were inspected?			
7:26-7.5(d)12	Have the drivers received any instruction or training to do with the handling of hazardous waste?	_____	_____	_____
7:26-7.5(d)15	Is the transporter equipped with emergency equipment in conformance with subpart H of 49 CFR 393? List equipment.	_____	_____	_____

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-7.5(f)1i to iv	Has the transporter ever had an unauthorized discharge of hazardous waste during transportation?	_____	_____	_____
	If yes, did the transporter:			
7:26-7.5(f)3i	Give notice, if required by 49 CFR 171.15 to the National Response Center?	_____	_____	_____
7:26-7.5(f)3ii	Report in writing as required by 49 CFR 171.16 to the Director, Office of Hazardous Materials, Transportation Bureau, Department of Transportation, Washington, DC 20590?	_____	_____	_____
7:26-7.5(f)3iii	Contact the Department at 609-292-5560 or 609-292-7172?	_____	_____	_____

MANIFESTS

7:26-7.5(d)5	Does the transporter have a manifest form to accompany the waste shipment?	_____	_____	_____
	Manifest document number: _____			
7:26-7.3(a)1	If the shipment originated from a site in New Jersey and is destined for another site in New Jersey, is the manifest form one supplied by the NJDEP?	_____	_____	_____
7:26-7.3(a)2	If the shipment originated from a site in another state and is destined for a TSDF in New Jersey, is the manifest form one supplied by the NJDEP or one approved for use in New Jersey by the Department?	_____	_____	_____
7:26-7.3(a)3	If the shipment originated from a site in New Jersey and is destined for a TSDF in another state, is the manifest form one supplied by the NJDEP or one approved for use by the Department?	_____	_____	_____
7:26-7.5(d)11	If the hauler was unable to deliver a manifested load to the designated facility, did they contact the generator and gain further instructions from them?	_____	_____	_____
	If yes, cite generator name and manifest number involved.			

# HAZARDOUS WASTE FACILITY STANDARDS

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-9.4(b)	<u>Waste Analysis</u>			
7:26-9.4(b)1i	Is there a detailed chemical and physical analysis of a representative sample of the waste(s) or each waste? (At a minimum, this analysis must contain all the information necessary for proper treatment, storage or disposal of the waste.)	—	—	—
7:26-9.4(b)1iii	Does the character of the waste handled at the facility change from day to day, week to week, etc., thus requiring frequent testing? Check only one: Waste characteristics vary _____ All waste(s) are basically the same _____ Company treats all waste(s) as hazardous _____	—	—	—
7:26-9.4(b)2	Is there a written waste analysis plan at the facility?  Does it contain:	—	—	—
7:26-9.4(2)i	Parameters for which each hazardous waste stream will be analyzed including constituents listed in NJAC 7:26-8.16 and the rationale for the selection of these parameters?	—	—	—
7:26-9.4(b)2ii	The test methods which will be used to test for these parameters?	—	—	—
7:26-9.4(b)2iii	The sampling method which will be used to obtain a representative sample of the waste to be analyzed?	—	—	—
7:26-9.4(b)2iv	The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up-to-date?	—	—	—
7:26-9.4(b)2v	For off-site facilities, the waste analysis that hazardous waste generators have agreed to supply?	—	—	—
7:26-9.4(b)2vii	Procedures which will be used to identify changes in waste stream characteristics?	—	—	—
7:26-9.4(b)3	Did the owner or operator submit the waste analysis plan to the Department?  If yes, when was the plan submitted?	—	—	—

		YES	NO	N/A
	Does hazardous waste come to this facility from an outside source? (e.g., another generator)	—	—	—
	If yes, list the name(s) of generators.			
7:26-9.4(b)4	If waste comes from an outside source, are there procedures in the waste analysis plan to insure that waste received conforms to the accompanying manifest?	—	—	—
	Does the plan describe:			
7:26-9.4(b)4i	The procedures which will be used to determine the identity of each shipment of waste managed at the facility?	—	—	—
7:26-9.4(b)4ii	The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling?	—	—	—
7:26-9.4(h)	<u>Security</u>			
	Does the facility have:			
7:26-9.4(h)1i	A 24 hour surveillance system which continuously monitors and controls entry onto the active portion of the facility?	—	—	—
7:26-9.4(h)1ii	An artificial or natural barrier, which completely surrounds the active portion of the facility; and a means to control entry, at all times, through the gates or other entrances to the active portion of the facility?	—	—	—
7:26-9.4(h)3	Are there "Danger-Unauthorized Personnel Keep Out" signs posted at each entrance to the facility?	—	—	—
	If no, explain what measures are taken for security.			

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-9.4(f)	<u>General Inspection Requirements</u>			
7:26-9.4(f)1	Does the owner or operator inspect the facility for malfunctions and deterioration, operator errors and discharges which may be causing, or may lead to:			
7:26-9.4(f)1i	Discharge of hazardous waste constituents to the environment?	—	—	—
7:26-9.4(f)1ii	A threat to human health?	—	—	—
7:26-9.4(f)3	Has the owner or operator developed, and does the owner or operator follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are utilized for the prevention, detection or response to environmental or human health?	—	—	—
7:26-9.4(f)3i	Did the owner or operator submit the written inspection schedule to the department?	—	—	—
	If yes, when was it submitted?			
7:26-9.4(f)3iii	Is the written inspection schedule kept at the facility?	—	—	—
7:26-9.4(f)3iv	Does the schedule identify the types of problems to be looked for during the inspection?	—	—	—
7:26-9.4(f)3v	Does the schedule include the frequency of inspection, based upon the rate of possible deterioration of the equipment and the probability of an environmental, or human health incident if the deterioration or malfunctions or any operator error goes undetected between inspections?	—	—	—
7:26-9.4(f)5	Is there evidence that problems reported in the inspection log have been remedied?	—	—	—
7:26-9.4(f)6	Does the owner/operator record inspections in a log?	—	—	—
	Are these records kept for at least three (3) years from the date of inspection?	—	—	—



YES    NO    N/A

Does the records include the date, and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial action?

\_\_\_\_

7:26-9.4(g)

Personnel training

Have facility personnel successfully completed a program of classroom instruction or on-the-job training within 6 months of having been employed?

\_\_\_\_

7:26-9.4(g)2

Is the program directed by a person trained in hazardous waste management procedures and does it include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed?

\_\_\_\_

7:26-9.4(g)5

If yes, have facility personnel taken part in an annual review of training?

\_\_\_\_

Is there written documentation of the following:

\_\_\_\_

7:26-9.4(g)6i

Job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job?

\_\_\_\_

7:26-9.4(g)6ii

A written job description for each position related to hazardous waste management?

\_\_\_\_

7:26-9.4(g)6iii

A written description of the type and amount of both introductory and continuing training given to personnel in jobs related to hazardous waste management?

\_\_\_\_

7:26-9.4(g)6iv

Documentation of actual training or experience received by personnel?

\_\_\_\_

7:26-9.4(g)7

Are training records kept on all current employees until closure of the facility and training records kept on former employees for 3 years from their last date of employment?

\_\_\_\_

7:26-9.4(g)8

Are semi-annual drills conducted involving all employees and appropriate local authorities to test emergency response capabilities at the facility in accordance with the contingency plan and emergency procedures development pursuant to NJAC 7:26-9.7?

\_\_\_\_

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-9.6	<u>Preparedness and prevention</u>			
	Does the facility comply with preparedness and prevention requirements including maintaining:			
7:26-9.6(b)1	An internal communications or alarm system?	---	---	---
7:26-9.6(b)2	A telephone or other device to summon emergency assistance from local authorities?	---	---	---
7:26-9.6(b)3	Portable fire equipment, spill control equipment, and decontamination equipment?	---	---	---
7:26-9.6(b)4	Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems?	---	---	---
7:26-9.6(c)	Is equipment tested and maintained?	---	---	---
7:26-9.6(d)1	Is there immediate access to communications or alarm systems during handling of hazardous waste?	---	---	---
7:26-9.6(e)	Adequate aisle space to allow unobstructed movement of personnel fire protection equipment, spill control equipment and decontamination equipment?	---	---	---
	If no, please explain.			
	In your opinion, do the types of waste on site require all of the above procedures, or are some not required?	---	---	---
	Explain.			
7:26-9.6(f)	Has the facility made the following arrangements, as appropriate for the type of waste handled on site?	---	---	---
7:26-9.6(f)1	Familiarize police, fire departments and emergency response teams with the layout of the facility and hazardous waste handled?	---	---	---

		YES	NO	N/A
7:26-9.6(f)2	Where more than one police and fire department might respond to an emergency, is there an agreement designating primary emergency authority to a specific police or fire department, and agreements with any others to provide support to the primary emergency authority?	—	—	—
7:26-9.6(f)3	Agreements with emergency response contractors, and equipment suppliers?	—	—	—
7:26-9.6(f)4	Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or discharges at the facility?	—	—	—
7:26-9.6(f)5	Arrangements with local fire departments to inspect the facility on a regular basis with at least two (2) inspections annually?	—	—	—
7:26-9.7	<u>Contingency plan and emergency procedures</u>			
7:26-9.7(a)	Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosions, hazards to human health or environment, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water?	—	—	—
7:26-9.7(b)	Are provisions of the plan carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment?	—	—	—
7:26-9.7(c)	Does the contingency plan describe the actions facility personnel shall take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility?	—	—	—
7:26-9.7(d)	Did the owner or operator prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with 40 CFR 112 or 151 or a Discharge Prevention, Containment and Countermeasure (DPCC) Plan in accordance with N.J.A.C. 7:1E-4.1 <u>et seq.</u> ?	—	—	—
	If yes, did the owner or operator amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this section?	—	—	—

- |             |  |       |       |       |
|-------------|--|-------|-------|-------|
| 7:26-9.7(e) | Does the plan describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services?  | _____ | _____ | _____ |
| 7:26-9.7(f) | Does the plan list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator and is this list kept up-to-date? Where more than one person is listed, one shall be named as primary emergency coordinator and others shall assume responsibility as alternates.  | _____ | _____ | _____ |
| 7:26-9.7(g) | Does the plan include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required? Is the list kept up-to-date? In addition, does the plan include the location and a physical description of each item on the list, and a brief outline of its capabilities? | _____ | _____ | _____ |
| 7:26-9.7(h) | Does the plan include an evacuation procedure for facility personnel where there is a possibility that evacuation could be necessary? Does this plan describe signal(s) to be used to begin evacuation, evacuation routes, and alternative evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires)?   | _____ | _____ | _____ |
| 7:26-9.7(i) | Is a copy of the contingency plan and all revisions to the plan:   |       |       |       |
|             | 1. Maintained at the facility; and   | _____ | _____ | _____ |
|             | 2. Has the contingency plan been submitted to local authorities (police, fire departments, emergency response teams)?  | _____ | _____ | _____ |
| 7:26-9.8    | <u>Closure plan</u>  |       |       |       |
| 7:26-9.8(c) | Does the facility have a written closure plan?   | _____ | _____ | _____ |
|             | Does the owner/operator keep a written copy of the closure plan and all revisions to the plan at the facility?   | _____ | _____ | _____ |
|             | If yes, does the plan include:   |       |       |       |

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-9.8(e)1i	A description of how and when the facility will be partially closed (if applicable) and ultimately closed?	___	___	___
7:26-9.8(e)1ii	The maximum extent of the operation which will be open during the life of the facility?	___	___	___
7:26-9.8(e)2	An estimate of the maximum inventory of wastes in storage or in treatment at any given time during the life of the facility?	___	___	___
7:26-9.8(e)3	A description of the steps needed to decontaminate facility equipment during closure?	___	___	___
7:26-9.8(e)4	A schedule for final closure including the anticipated date when the wastes will no longer be received, the date when completion of final closure is anticipated, and intervening milestone dates which will allow tracking of the progress of closure?	___	___	___
	<u>Post Closure Plan</u>			
7:26-9.9(g)	Does the facility have a written post-closure plan kept at the facility?	___	___	___
	If yes, does the plan:			
7:26-9.9(i)	Identify the activities which will be carried on after closure and the frequency of these activities?	___	___	___
7:26-9.9(i)1	Include a description of the planned ground-water monitoring activities and frequencies at which they will be performed?	___	___	___
7:26-9.9(i)2	Include a description of the planned maintenance activities, and frequency at which they will be performed, to insure the following:	___	___	___
7:26-9.9(i)2i	The integrity of the cap and final cover or other containment structures where applicable?	___	___	___
7:26-9.9(i)2ii	Describe the function of the facility monitoring equipment?	___	___	___
7:26-9.9(i)3	Include the name, address and phone number of a person or office to contact about the disposal facility during the post-closure period?	___	___	___
	Does the owner/operator have a written estimate of the cost of post-closure for the facility?	___	___	___
	If yes, what is it?			

Please circle all appropriate activities and answer questions on indicated pages for all activities circled.

<u>Storage</u>	<u>Treatment</u>	<u>Disposal</u>
Container - pg. 9	Tank - pg. 12	Landfill - pg. 18
Tank, above ground - pg. 12	Surface Impoundments - pg. 15	
Tank, below ground - pg. 12	Incineration - pg. 20	Surface Impoundments - pg. 15
Surface Impoundments - pg. 15	Thermal Treatment - pg. 23	Other _____
Waste Piles - pg. 17		
Other _____	Chemical, Physical and Biological Treatment - pg. 25	
	Other _____	

YES    NO    N/A

7:26-9.4(d)

Containers

What type of containers are used for storage?  
Describe the size, type, quantity and nature  
of wastes (e.g., 12 fifty-five gallon drums  
of waste acetone)

7:26-10.4(b)

Is there a containment system for spills,  
leaks and precipitation?

Is yes, describe the containment system.

7:26-9.4(d)1i

Do the containers appear to be of sturdy leak-  
proof construction of adequate wall thickness,  
weld, hinge and seam strength, and of  
sufficient material strength to withstand  
side and bottom shock, while filled, without  
impairment of the container's ability to  
contain hazardous waste?

If no, explain.

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-9.4(d)lii	Are the lids, caps, hinges or other closure devices of sufficient strength that when closed, they will withstand dropping, overturning or other shock without impairment of the container's ability to contain hazardous waste?	_____	_____	_____
	If no, explain.			
7:26-9.4(d)2	Do the containers appear to be in good condition, not in danger of leaking?	_____	_____	_____
7:26-9.4(d)2	If not, please describe the type, condition and number of leaking or corroded containers. Be detailed and specific.			
7:26-9.4(d)4i	Are all containers securely closed, except those in use, so that there is no escape of hazardous waste or its vapors?	_____	_____	_____
	If no, explain.			
7:26-9.4(d)4iii	Do containers appear to be properly opened, handled or stored in a manner which will minimize the risk of the container rupturing or leaking?	_____	_____	_____
	If no, explain.			
7:26-9.4(d)iv	Are containerized hazardous wastes segregated in storage by waste type?	_____	_____	_____
7:26-9.4(d)v	Are containerized hazardous wastes arranged so that their identification label is visible?	_____	_____	_____
7:26-9.4(d)3	Are hazardous wastes stored in containers made of compatible materials?	_____	_____	_____

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-9.4(d)5	Does the owner/operator inspect the container storage area at least daily, looking for leaks and for deterioration caused by corrosion or other factors?	_____	_____	_____
7:26-9.4(d)6	Are containers holding ignitable and reactive waste located at least 50 feet (15 meters) away from the facility's property line?	_____	_____	_____
7:26-9.4(d)7i	Are incompatible wastes, or incompatible wastes and materials placed in the same container?	_____	_____	_____
	If yes, explain.			
7:26-9.4(d)7ii	Are hazardous wastes placed in unwashed containers that previously held incompatible wastes?	_____	_____	_____
	If yes, explain.			
7:26-9.4(d)7iii	Are containers holding hazardous waste that are incompatible with any waste or other materials stored nearby in other containers, open tanks, or surface impoundments separated from the other materials or protected from them by means of a dike, berm, wall or other device?	_____	_____	_____
7:26-9.4(e)1i	Are ignitable, reactive or incompatible wastes protected from sources of ignition or reaction?	_____	_____	_____
	If no, explain.			
7:26-9.4(e)1ii	Does the owner/operator confine smoking and open flames to specially designated locations when ignitable or reactive wastes are being handled?	_____	_____	_____
	If no, explain.			



YES    NO    N/A

7:26-9.4(e)1iii

Does the owner/operator conspicuously place "No Smoking" signs whenever there is a hazard from ignitable or reactive waste?

\_\_\_\_\_

If the treatment, storage or disposal of ignitable or reactive waste, and the mixture of incompatible wastes and materials, conducted so that it does not:

7:26-9.4(e)2i

Generate extreme heat or pressure, fire or explosion, or violent reaction?

\_\_\_\_\_

7:26-9.4(e)2ii

Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health?

\_\_\_\_\_

7:26-9.4(e)2iii

Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion?

\_\_\_\_\_

7:26-9.4(e)2iv

Damage the structural integrity of the device or facility containing the waste?

\_\_\_\_\_

7:26-9.4(e)2v

Threaten human health or the environment?

\_\_\_\_\_

7:26-11.2

Tanks

What are the approximate number and size of tanks containing hazardous waste?

Identify the waste treated/stored in each tank.

General Operating Requirements

7:26-11.2(a)2

Are hazardous wastes or treatment reagents placed in the tank that could cause the tank or its inner liner to rupture, leak or corrode?

\_\_\_\_\_

If yes, please explain.

Are there leaking tanks?

\_\_\_\_\_

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-11.2(a)2	Are all hazardous wastes or treatment reagents being placed in tanks compatible with the tank material so that there is no danger of ruptures, corrosion, leaks or other failures?	---	---	---
7:26-11.2(3)	Do uncovered tanks have at least 2 feet of freeboard or an adequate containment structure?	---	---	---
7:26-11.2(a)4	If waste is continuously fed into a tank, is the tank equipped with a means to stop the inflow from the tank, e.g., bypass system to a standby tank?	---	---	---
7:26-11.2(c)	<u>Inspections</u>			
	Is the tank(s) inspected for:			
	1. Discharge control equipment (each operating day)	---	---	---
	2. Monitoring equipment (each operating day)	---	---	---
	3. Level of waste in tank (each operating day)	---	---	---
	4. Construction of materials of the tank (weekly)	---	---	---
	5. Are the tanks and surrounding areas (e.g., dike) inspected weekly for leaks, corrosion or other failures (weekly)?	---	---	---
7:26-9.2(b)	Are there underground tanks used to store hazardous waste?	---	---	---
	If yes, how many and can they be entered for inspection?	---	---	---
	Has the underground tank been in use on or before November 19, 1980? Specify date.	---	---	---
	If no, when was the tank placed in use?			
7:26-11.2(e)	Are ignitable or reactive wastes stored in a manner which protects them from a source of ignition or reaction?	---	---	---
	If no, please explain.			

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-11.2(f)	Does it appear that incompatible wastes are being stored separate from each other?	___	___	___
7:26-9.2(b)3i	Does the facility have a groundwater monitoring plan approved by the Department?	___	___	___
7:26-9.2(b)3ii	Is the use of the tank specified to the manufacturers recommended lifetime?	___	___	___
7:26-10.5(e)6	Are the underground tanks subjected to periodic integrity testing?	___	___	___

YES    NO    N/A

7:14A-6

Groundwater monitoring

(Applies only to: surface impoundments,  
landfills, land disposal facilities)

7:14A-6.2

Does the owner/operator have a groundwater  
monitoring plan approved by the Department  
and capable of determining the facility's  
impact on the quality of groundwater?

\_\_\_\_\_

If no, please explain.

How many monitoring wells has the facility  
installed?

What is the depth to groundwater?

How many deep monitoring wells are onsite?  
(Indicate depth of monitoring wells)

How many shallow monitoring wells are onsite?  
(Indicate depth of monitoring wells)

7:14A-6.3(a)

Is the groundwater monitoring system capable  
of yielding groundwater samples for analysis?

\_\_\_\_\_

If no, please explain.

7:14A-6.3(a)1

Are monitoring wells installed hydraulically  
upgradient?

\_\_\_\_\_

If yes, specify how many and the depth of  
each.

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:14A-6.3(a)2	How many monitoring wells are installed hydraulically down gradient?  If yes, specify how many and the depth of each.	___	___	___
7:14A-6.4(a)	Does the owner/operator have a groundwater sampling and analysis plan?  If no, please explain.	___	___	___
7:14A-6.4(a)	Does the plan include procedures and techniques for:  1. Sample collection 2. Sample preservation and shipment 3. Analytical procedures 4. Chain of custody	___ ___ ___ ___	___ ___ ___ ___	___ ___ ___ ___
7:26-11.3	<u>Surface Impoundments</u>  Describe the design and operating features of the surface impoundment to prevent groundwater contamination (e.g., liner leachate collection system).          Give the approximate size of surface impoundments (gallons or cubic feet). Please specify the types of waste stored and treated.			
7:26-11.3(a)	Is there at least 2 feet of freeboard in the impoundment?	___	___	___

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-11.3(b)	Do all earthen dikes have a protective cover to preserve their structural integrity?	—	—	+
	If yes, please specify the type of covering.			
7:26-9.4(b)1	Does the owner/operator have a detailed chemical and physical analysis of a representative sample of the waste in the impoundment?	—	—	—
7:26-9.4(c)2	Does the owner/operator place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility?	—	—	—
7:26-11.3(d)	Does the owner or operator inspect:			
7:26-11.3(d)1	The freeboard level at least once each operating day to ensure compliance with subsection 11.3(a)?	—	—	—
7:26-11.3(d)2	The surface impoundment, including dikes and vegetation surrounding the dike, at least once a week to detect any leaks, deterioration or failures in the impoundment?	—	—	—
7:26-11.3(f)	Is ignitable or reactive waste placed in the surface impoundment?	—	—	—
7:26-11.3(f)1	If yes, is the waste treated, rendered, or mixed before or immediately after placement in the impoundment?	—	—	—
7:26-11.3(f)1i	Does the resulting waste, mixture, or dissolution of material no longer meet the definition of ignitable or reactive waste?	—	—	—
7:26-11.3(f)1ii	Is the waste treated, rendered or mixed so that it does not:			
7:26-9.4(e)2i	Generate extreme heat or pressure, fire or explosion, or violent reaction?	—	—	—
7:26-9.4(e)2ii	Produce uncontrolled toxic mists, fumes, dusts, of gases in sufficient quantities to threaten human health?	—	—	—
7:26-9.4(e)2iii	Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion?	—	—	—

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-9.4(e)2iv	Damage the structural integrity of the device or facility containing the waste?	___	___	___
7:26-9.4(e)2v	Threaten human health or the environment?	___	___	___
7:26-11.3(f)2	Is the surface impoundment used solely for emergencies?	___	___	___
7:26-11.3(g)	Are incompatible wastes, or incompatible wastes and materials placed in the same surface impoundment?	___	___	___
	If yes, is the waste managed so that it does not:			
7:26-9.4(e)2i	Generate extreme heat or pressure, fire or explosion, or violent reaction?	___	___	___
7:26-9.4(e)2ii	Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health?	___	___	___
7:26-9.4(e)2iii	Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion?	___	___	___
7:26-9.4(e)2iv	Damage the structural integrity of the device or facility containing the waste?	___	___	___
7:26-9.4(e)2v	Threaten human health or the environment?	___	___	___

Waste Piles

How many waste piles are on-site and approximately how large are they? (Please indicate size and height and types of wastes in piles.)

Is the waste pile protected from wind erosion? \_\_\_

a) Does it appear to need such protection? \_\_\_

b) Explain what type of protection does exist.

7:26-9.3(a)5i Is the waste pile larger than 200 cubic yards? \_\_\_

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-9.3(a)5ii	Is the pile placed on an impermeable base that is compatible with the waste?	_____	_____	_____
	If no, explain.			
7:26-9.3(a)5iii	Is run-on diverted away from the pile?	_____	_____	_____
7:26-9.3(a)5iv	Is leachate and run-off from the pile collected and managed as a hazardous waste?	_____	_____	_____
7:26-11.4	<u>Landfills</u>			
	Identify the types of waste and size of the landfill.			
	<u>General Operating Requirements</u>			
7:26-11.4(a)1	Is run-on diverted away from all portions of the landfill?	_____	_____	_____
7:26-11.4(a)2	Is run-off from active portions of the landfill collected?	_____	_____	_____
7:26-11.4(a)3	Is waste which is subject to wind dispersal controlled?	_____	_____	_____
	Please explain how.			
7:26-11.4(a)4	Does waste disposal or the disposal operation occur within 100 feet (60.6 meters) of the property boundary?	_____	_____	_____
7:26-11.4(a)6	Are untreated, ignitable, or reactive wastes placed in the landfill?	_____	_____	_____
	If yes, explain.			



		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-11.4(a)7	Are incompatible wastes, or incompatible wastes and materials placed in the same hazardous waste landfill cell?	_____	_____	_____
	If yes, explain.			
7:26-11.4(a)8	Are bulk or non-containerized liquid waste or waste containing free liquids placed in a hazardous waste landfill?	_____	_____	_____
	If yes:			
7:26-11.4(a)8i	Does the hazardous waste landfill have a liner which is chemically and physically resistant to the added liquid and a functioning leachate collection and removal system with a capacity sufficient to remove all leachate produced?	_____	_____	_____
7:26-11.4(a)8ii	Before disposal, is the liquid waste or waste containing free liquids treated or stabilized, chemically or physically, so that free liquids are no longer present?	_____	_____	_____
7:26-11.4(a)9	Are containers holding liquid waste or waste containing free liquids placed in a hazardous waste landfill?	_____	_____	_____
	If yes:			
7:26-11.4(a)9i	Is the container designed to hold liquids or free liquids for a use other than storage, such as a battery?	_____	_____	_____
7:26-11.4(a)9ii	Is the container very small, such as an ampule?	_____	_____	_____
7:26-11.4(a)10	Are empty containers crushed flat, shredded, or similarly reduced in volume before it is buried beneath the surface of a hazardous waste landfill?	_____	_____	_____
7:26-11.4(a)11	Does the owner or operator of a hazardous waste landfill continue to dispose of hazardous wastes subsequent to the detection of any liquid, in the secondary collection system?	_____	_____	_____
7:26-11.4(b)	Does the owner or operator of a hazardous waste landfill maintain an operating record required in N.J.A.C. 7:26-9.4(i)?	_____	_____	_____

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-11.4(b)1	Does the owner/operator maintain a map, the exact location and dimensions, including depth of each cell with respect to permanently surveyed bench marks?	_____	_____	_____
7:26-11.4(b)2	The contents of each cell and the appropriate location of each hazardous waste type within each cell?	_____	_____	_____
	Are containers holding liquid waste or waste containing free liquids placed in the landfill?	_____	_____	_____
	Please describe the types and contents of such containers placed in the landfill.			
	Are empty containers placed in the landfill crushed flat, shredded or similarly reduced in volume before they are buried?	_____	_____	_____
	Are small containers of hazardous waste in overpacked drums placed in the landfill?	_____	_____	_____
	If yes, please describe precautions taken to prevent the release of the waste.			
7:26-11.5	<u>Incinerator</u>			
	What type of incinerator is at the site (e.g., waterwall incinerator, boiler, fluidized bed, etc.)			
	List the types and quantities of hazardous waste incinerated.			

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
	Is the residue from the incinerator a hazardous waste?	_____	_____	_____
	What types of air pollution control devices (if any) are installed in the incinerator unit?			
	Is energy recovered from the process?	_____	_____	_____
	If yes, describe.			
	What is the destruction and removal efficiency for the organic hazardous waste constituents?			
7:26-11.5(b)1	Does the operating record include additional analysis and to determine types of pollutants which might be emitted including:			
7:26-11.5(b)1i	Heating value of the waste?	_____	_____	_____
7:26-11.5(b)1ii	Halogen and sulfur content?	_____	_____	_____
7:26-11.5(b)1iii	Concentrations of lead and mercury?	_____	_____	_____
7:26-11.5(2)	If no to any of the above questions, is there justification and documentation?	_____	_____	_____
	If operating, does it appear the incinerator is operating at steady state for conditions of operation, including temperature and air flow?	_____	_____	_____
	<u>Monitoring and Inspection</u>			
7:26-11.5(c)1	Are existing instruments relating to combustion and emission controls monitored every 15 minutes?	_____	_____	_____
	If no, explain.			

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-11.5(c)1	Does the incinerator have all the following instruments for measuring: wastefeed, auxiliary fuel feed air flow, incinerator temperature scrubber flow, and scrubber pH? (Circle missing instruments.)	_____	_____	_____
	If no, explain.			
7:26-11.5(c)2	Is the stack plume observed visually at least hourly for opacity and color?	_____	_____	_____
7:26-11.5(c)3	Are there any signs of leaks, spill and fugitive emission associated with the pumps, valves, conveyors, pipes, etc?	_____	_____	_____
	If yes, describe.			
7:26-11.5(c)3	Are all emergency shutdown controls and system alarms checked to assure proper operation?	_____	_____	_____
	Is there any reason to believe the incinerator is being operated improperly? i.e., steady state conditions are not maintained.	_____	_____	_____
	If yes, explain.			
7:26-11.5(c)3	Is the incinerator inspected daily?	_____	_____	_____
7:26-11.5(e)	Is there open burning of hazardous waste?	_____	_____	_____
	If yes, what is being burned? (Only burning or detonation of explosives is permitted.)			
	If open burning or detonation of explosives is taking place, approximately what is the distance from the open burning or detonation to the property of others?			

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Are containers holding liquid waste or waste containing free liquids placed in the landfill?	—	—	—
Please describe the types and contents of such containers placed in the landfill.			
Are empty containers placed in the landfill crushed flat, shredded or similarly reduced in volume before they are buried?	—	—	—
Are small containers of hazardous waste in overpacked drums placed in the landfill?	—	—	—
If yes, please describe precautions taken to prevent the release of the waste.			

7:26-11.6

Thermal Treatment

What type of thermal treatment is at the site (e.g., waterwall incinerator, boiler, fluidized bed, etc.)

List the types and quantities of hazardous waste thermally treated.

Is the residue from the thermal treatment unit a hazardous waste?

What types of air pollution control devices (if any) are installed in the thermal treatment unit?

YES NO N/A

Is energy recovered from the process?

If yes, describe.

What is the destruction and removal efficiency for the organic hazardous waste constituents?

7:26-11.6(b)1

Does the operating record include additional analysis and to determine types of pollutants which might be emitted including:

7:26-11.6(b)1i

Heating value of the waste?

7:26-11.6(b)1ii

Halogen and sulfur content?

7:26-11.6(b)1iii

Concentrations of lead and mercury?

7:26-11.6(2)

If no to any of the above questions, is there justification and documentation?

If operating, does it appear the thermal treatment unit is operating at steady state for conditions of operation, including temperature and air flow?

Monitoring and Inspection

Are existing instruments relating to combustion and emission controls monitored every 15 minutes?

If no, explain.

7:26-11.6(c)1

Does the thermal treatment have all the following instruments for measuring: wastefeed, auxiliary fuel feed air flow, incinerator temperature scrubber flow, and scrubber pH? (Circle missing instruments.)

If no, explain.

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
7:26-11.6(c)2	Is the stack plume observed visually at least hourly for opacity and color?	—	—	—
7:26-11.6(c)3	Are there any signs of leaks, spill and fugitive emission associated with the pumps, valves, conveyors, pipes, etc?	—	—	—
	If yes, describe.			
7:26-11.6(c)3	Are all emergency shutdown controls and system alarms checked to assure proper operation?	—	—	—
	Is there any reason to believe the thermal treatment unit is being operated improperly? i.e., steady state conditions are not maintained.	—	—	—
	If yes, explain.			
7:26-11.6(c)3	Is the thermal treatment inspected daily?	—	—	—
7:26-11.6(e)	Is there open burning of hazardous waste?	—	—	—
	If yes, what is being burned? (Only burning or detonation of explosives is permitted.)			
	If open burning or detonation of explosives is taking place, approximately what is the distance from the open burning or detonation to the property of others?			
7:26-11.7	<u>Chemical, Physical and Biological Treatment</u> (Other than in tanks, surface impoundments or plant treatment facilities)			

YES    NO    N/A

Describe the treatment system at this facility  
and the types of wastes treated.

7:26-11.7(a)2

Does the treatment process system show any signs  
of ruptures, leaks or corrosion?

\_\_\_\_\_

If yes, describe.

7:26-11.7(a)3

Is there a means to stop the inflow of contin-  
uously-fed hazardous wastes?

\_\_\_\_\_

Inspections

7:26-11.7(c)1

Is the discharge control safety equipment (e.g.,  
waste feed cut-off systems, by-pass systems,  
drainage systems and pressure relief systems)  
in good working order?

\_\_\_\_\_

7:26-11.7(c)1

Are they inspected at least once each  
operation day?

\_\_\_\_\_

7:26-11.7(c)2

Does the data gathered from the monitoring  
equipment (e.g., pressure and temperature  
gauges) show treatment process is operating  
according to design?

\_\_\_\_\_

7:26-11.7(c)2

Is data gathered at least once each  
operating day?

\_\_\_\_\_

7:26-11.7(c)3

Are construction materials of the treatment  
process inspected at least weekly to detect  
corrosion or leaking of fixtures and seams?

\_\_\_\_\_

7:26-11.7(c)4

Are the discharge confinement structures (e.g.,  
dikes) immediately surrounding the treatment  
unit inspected at least weekly to detect  
erosion or obvious signs of leakage (e.g.,  
wet spots or dead vegetation).

\_\_\_\_\_

7:26-11.7(e)1

Are ignitable or reactive waste fed into the  
waste treatment system treated or protected  
from any material or conditions which may  
cause it to ignite or react?

\_\_\_\_\_

If yes, explain how.



YES    NO    N/A

7:26-11.7(f)

Are the incompatible wastes placed in the same treatment process?

—    —    ✓

If yes, please explain.

REFERENCE 39

## NOTICE OF VIOLATION

EIP ID NO. NJDOC2195303DATE July 1, 1987NAME OF FACILITY Mitz Metallurgical CorpLOCATION OF FACILITY 3900 S. Clinton Ave. S. PlainfieldNAME OF OPERATOR Scott Eric - Manager Envir. Control & Metal Recovery Dept.

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

## DESCRIPTION OF VIOLATION

NJAC 7:26-9.7(g) Contingency plan to include physical description & capabilities of all emergency equipment  
NJAC 7:26-9.4(g)(3) Semi-annual drills for all employees & local authorities

Remedial action to correct these violations must be initiated immediately and be completed by

July 16, 1987. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of \$25,000 per violation.

Jennifer Meyer  
Investigator, Division of Waste Management  
Department of Environmental Protection

REFERENCE 40

Degussa 

Metz Metallurgical  
Corporation  
Certified #P 025 306 697

July 8, 1987

Ms. Jennifer Meyer  
New Jersey Department of Environmental Protection  
DHWM  
Twin Rivers Professional Building  
East Windsor, NJ 08520

Dear Ms. Meyer:

Subject: RCRA Compliance Inspection July 2, 1987

Here are the documents you asked for during your inspection. A copy is enclosed of our new Contingency Plan showing the location, type and capabilities of fire fighting equipment, and decontamination equipment.

The evacuation plan showing emergency routes has not yet been completed. An accurate drawing showing fire walls, door swings, and all interior walls have been completed and will form the basis for the evacuation routes. The last two weeks of July we are shutdown for our annual inventory, and most people take their vacation during this time. The drawing showing evacuation routes will be completed by August 10, 1987, and I will forward you a copy. We have a schedule for implementing the required semi-annual drills that has two deadlines.

A. September 18, 1987 - Completion of all mechanical and construction changes.

B. October 23, 1987 - First drill.

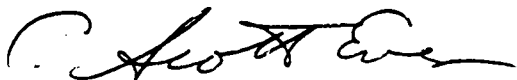
We have involved the local Fire Inspector in developing the emergency egress routes and will continue to use his expertise up to and including the first drill.

As part of this package, I have included all available documentation regarding our TSDF delisting and the history of all spills at this facility.

If any of this is unclear or should you require any additional information, please do not hesitate to contact me.

Cordially,

METZ METALLURGICAL CORPORATION

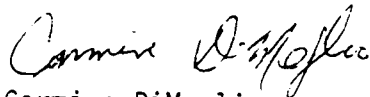


C. Scott Eves  
Manager Environmental Control  
and Metal Recovery Departments

CSE:cmb

RE: Potassium Hydroxide Spill

On August 25, 1982, Metz Metallurgical Corporation had a 6,000 gallon Potassium Hydroxide tank rupture during a routine fill operation. The Fire Department was called and they in turn called the EPA authorities. The authorities came and inspected the site. After one week, they returned. The Fire Department has a copy of a report that they filed. Metz Metallurgical has no written report of the incident but has requested the Fire Department report from the South Plainfield Fire Department.



Carmine DiMeglio  
Process Engineer

CDM:ame  
4/11/85

## CAUSTIC SPILL

On August 25, 1982, we had a spill of approximately 1,000 gallons of 45% potassium hydroxide solution from a storage tank. The storage tank was constructed of Fiberglass Reinforced Plastic and failed catastrophically during a routine filling operation because excess air pressure was used to unload the truck. A dike was constructed of sand and hay bales to contain the spill and to block off access to the storm water run-off drain to prevent any further release to the stream. A dike was also constructed downstream to contain the potassium hydroxide that had already reached the stream. The spilled potassium hydroxide was pumped both back into the delivery truck, and into our plant to the waste water neutralization facility. After all the potassium hydroxide had been collected, the area involved in the spill (see drawing #12) was washed with water and the water was pumped to our neutralization facility. This was repeated until the pH of the solution reached neutrality.

To prevent a re-occurrence of this event, we purchased a plastic lined steel tank, instead of Fiberglass Reinforced Plastic, to store the potassium hydroxide. We built a wall around the tank to act as a secondary containment and have also designed and implemented a tertiary containment system.

## SILVER CHLORIDE SPILL

On February 14, 1986, we had a spill (by best estimate - See Note 1 below) of approximately three quarters of a pound of silver chloride. The silver chloride particles were discharged into our NJPDES permitted outfall of the west end of the facility. This outfall is fed by storm water runoff, roof drains and non contact cooling water. During a tour of the roof, silver chloride was noticed near one of the roof drains. We immediately plugged all roof drains in the vicinity to prevent any release of silver chloride. The roof was then washed down with water and the roof surface was squeegeed with excess water into our Metal Recovery Department (See Drawing # 12).

The origin of the silver chloride was a silver dissolver that had gone overpressure during the night and ruptured a safety pressure disk. This safety pressure disk was vented to the roof. The very small quantity of silver nitrate estimated to be less than 10 ounces of silver was then caught in the snow. The warm weather the next day melted the snow. The silver nitrate then combined with excess salt on the roof, and converted to silver chloride.

After investigation, it was discovered that some of the silver chloride had already reached the outfall. An internal lab analysis of the discharge revealed a silver chloride concentration of 55.9 parts per million (mg/l) and a silver ion concentration of 3.9 parts per million (mg/l).

The total volume of runoff solution (melted snow) from that section of the roof could not have exceeded 780 gallons if none had been retained and pumped to our Metal Recovery Department. The calculations are as follows:

1. Total area of roof in drainable vicinity of the safety pressure vent equals 2500 sq. ft.
2. One inch of snow on roof equals less than 1/2 inch of water.
3. 1/2 inch of water or 2500 sq. ft. equals 779 gallons.

### Note 1

The maximum amount of contained silver that was discharged was calculated as follows:

In the event of a rapid pressure release the film of silver nitrate solution on the dome of the vessel would probably be drawn into the pressure release stream. The maximum thickness of this film would be 1/32 inch. A 1/32 inch film on 6 sq. ft. (864 sq. in.) equals 27 cu. in. of solution. This equals 0.12 gallons. The maximum concentration of these solutions (basically condensate) is 100 oz. per gallon x 0.12 gallons equals 12 oz. of silver maximum.



REFERENCE 41

# Studies of the Early Mesozoic Basins of the Eastern United States

ALBERT J. FROELICH and GILPIN R. ROBINSON, Jr.,  
editors

A summary of current research on early Mesozoic sedimentary and igneous rocks and related mineral resources and studies of geophysics, structure, and tectonics of the basins of the Eastern United States

U.S. GEOLOGICAL SURVEY BULLETIN 1776

# STRATIGRAPHIC FRAMEWORK AND DISTRIBUTION OF EARLY MESOZOIC ROCKS OF THE NORTHERN NEWARK BASIN, NEW JERSEY AND NEW YORK

R.A. Parker, H.F. Houghton,<sup>1</sup> and R.C. McDowell

## Abstract

Sedimentary rocks below the Early Jurassic Orange Mountain Basalt in the Newark basin in New Jersey and New York are divided into three formations: the Stockton and Lockatong Formations of Late Triassic age and the overlying Passaic Formation (herein adopted) of Late Triassic and Early Jurassic age. Field mapping in the northern part of the basin has shown that dark-gray shale and siltstone of the Lockatong Formation tongue out into arkosic sandstone of the upper Stockton. The Passaic Formation can be subdivided into four informal, mappable lithofacies units, largely on the basis of their stratigraphic position, areal distribution, color, and grain size. Paleocurrent indicators and the distribution of lithofacies in the Passaic suggest a strongly south-southwest-oriented axial paleoflow in the northern Newark basin. The composition and areal distribution of the stratigraphic units in the basin should prove useful in deciphering the geologic history of the area.

## INTRODUCTION

Sedimentary rocks below the Orange Mountain Basalt (the first Watchung Basalt of earlier workers) in the northern Newark basin in New Jersey and New York are subdivided into three formations of early Mesozoic age: arkosic sandstone and red siltstone and sandstone of the Stockton Formation, cycles of gray and black argillite and siltstone of the Lockatong Formation, and red-brown mudstone, siltstone, sandstone, and conglomerate of the Passaic Formation (table 1). Existing geologic maps show various interpretations of stratigraphic relations among the three formations in the northern part of the Newark basin. Difficulties are encountered where criteria used to establish boundaries between the formations elsewhere in the basin are applied in the northern part because of lateral changes in the formations and interfingering. A number of maps and measured sections (U.S. Geological Survey, 1967; Savage, 1968; Sanders, 1974; Olsen, 1980a) indicate that the Passaic Formation (herein adopted; lower part of the Brunswick Formation of earlier workers) becomes significantly coarser grained northward, and north of the pinchout of the Lockatong, the Passaic directly overlies the Stockton. Field work for this study was initiated with three principal objectives: (1) to examine stratigraphic relations among these early Mesozoic formations, (2) to determine whether the lithologic sub-

division of the Passaic Formation used by Savage (1967, 1968) in Rockland County, New York, could be extended southward into New Jersey, and (3) to ascertain whether gray siltstones in the Passaic Formation in the central part of the basin could be traced into the northern part.

Our mapping in the northern part of Newark basin has shown Stockton lithology both above and below the Lockatong Formation and has confirmed that the Lockatong Formation intertongues with the Stockton Formation near their intrusion by the Palisade Diabase as noted by Van Houten (1969, p. 342) and later demonstrated by Olsen (1980c) (fig. 1). The Passaic Formation has been shown to directly overlie the Stockton Formation everywhere in the mapped area and has been divided into four lithologic units somewhat modified from those of Savage (1968) (fig. 1).

The geologic map (fig. 1) shows what we consider to be mappable units within the early Mesozoic rocks of the northern Newark basin, on the basis of the results of previous workers and our own field observations and examination of core samples and logs. Positions of lithologic contacts are interpretive in many places not only because of the gradational nature of the contacts but also because of extensive glacial or urban cover.

## STRATIGRAPHIC UNITS

### Stockton Formation

At the composite type section on the Delaware River, the Stockton Formation is approximately 1,500 m thick (McLaughlin, 1959). The dominant lithologies are gray and buff-colored arkose and arkosic conglomerate and red siltstone and arkosic sandstone. The formation generally is more fine grained near the top, and the proportion of red shale and siltstone is greater. The top of the Stockton is placed at the base of the lowest continuous black siltstone unit of the overlying Lockatong Formation (Olsen, 1980c). In the northern Newark basin the Stockton sequence below the Lockatong thins to less than 250 m (Olsen, 1980c). Examination of approximately 62 ft of core from 11 different holes in the Secaucus, New Jersey, area indicated that Stockton-like lithology occurs in stratigraphic positions as much as 300 m above the Lockatong Formation. The total core consisted of about 64 percent white to tan arkose, 27 percent

<sup>1</sup>New Jersey Geological Survey, CN 029, Trenton, NJ 08625.

REFERENCE 42

COMMUNICATIONS CENTER NOTIFICATION REPORT

CASE NO. 86 - 03 - 30 - 23:22  
(Yr) (Mo) (Day) (Time)

DATE 03 - 30 - 88 BY C. McAfee (Initials) REVIEWED BY

INCIDENT REPORT BY:

Name SCOTT EVES Phone 201-561-1100  
Street 3900 SOUTH CLINTON AVE.  
City SOUTH PLAINFIELD State NEW JERSEY  
Affiliation/Title METZ METALLURGICAL CORP.

INCIDENT LOCATION:

Name (Site): METZ METALLURGICAL CORP. X Facility Other  
Street 3900 SOUTH CLINTON AVE. Phone 201-561-1100  
City SOUTH PLAINFIELD County MIDDLESEX State N.J. Zip Code

Date of Incident: 03 - 30 - 88 Time: 12:00  
(Mo) (Day) (Yr)

IDENTITY OF SUBSTANCE(S) SPILLED, RELEASED, ETC.:

X Known Suspected Unknown  
Name of Substance(s) (Gas/Liquid/Solid): CORROSIVE LIQUID  
CAS Number:  
Amount Released/Spilled 100 GALLONS Actual Potential X Estimated  
Substance Contained (Y/N/U)  
Type of Release/Spill: X Terminated Continuous Intermittent  
Hazardous Material (Y/N)

NATURE OF INCIDENT:

Complaint Munic. Notification Emergency X Facil. Notification

INCIDENT DESCRIPTION:

Fire Explosion Air Rel X Spill MVA Derailment Smoke/Dust  
Odors Sewage NJPOES Noise Illegal Dumping Wildlife  
Equip Start-up/Shutdown, Equip Fail/Upset, etc.  
Other (specify)

Injuries (Y/N/U)

Facility Evacuation (Y/N/U)

Public Evacuation (Y/N/U)

Contamination of Air X Land Water

Potable Water Source (Y/N/U)

Receiving Water NONE

Location Type: Residential X Industrial Rural

Public Exposure (Y/N/U)

Police at Scene (Y/N/U)

Firemen at Scene (Y/N/U)

Assistance Requested (Y/N/U)

Wind Direction/Speed ? / ?

Precipitation (rain/snow) CLEAR

Sensitive Population (Hosp., School, Nurs. Home)

STATUS AT INCIDENT SCENE UNKNOWN AMOUNT OF 55 GALLON DRUMS WERE LEAKING.

RESPONSIBLE PARTY:

X Known Suspected Unknown  
Company Name METZ METALLURGICAL CORP. Phone 201-561-1100  
Contact SCOTT EVES Title  
Street 3900 SOUTH CLINTON AVE.  
City SOUTH PLAINFIELD County MIDDLESEX State N.J. Zip Code

OFFICIALS NOTIFIED (Name/Title):

NJSP: TRP. ARTHURS / N.J.S.P. Phone 882-2000 Date/Time 03-30 / 23:35 (T/M)  
Local Health / Phone Date/Time / (T/M)  
Local Munic: SOUTH PLAINFIELD P/O. BADGE 5179 Phone 201-755-0700 Date/Time 03-30 / 23:33 (T/M)  
USEPA: / Phone Date/Time / (T/M)

INCIDENT REFERRED TO:

X DEQ DWR DSWM DHSM X DHWM DOH DFG OPF DCJ DCR  
Region: Northern Metro X Central Southern ER1 X ER2  
1. Name/Affil FURMAN STOOP / E.R.D.O. Phone HOME Date/Time 03-30 / 23:26 (T/M)  
2. Name/Affil / DHWM CEO Phone TELEFAX Date/Time 03-30 / P.M. (T/M)  
3. Name/Affil / Phone Date/Time / (T/M)

IMMEDIATE DEP RESPONSE (Y/N) [Emergency (Y/N)] Enforcement (Y/N)

COMMENTS

ALL responded LFA 4/15/88

## NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

AT 1125

## DUTY OFFICER NOTIFICATION REPORT

CASE NO. 18-3-30-1322  
(Yr) (Mo) (Day) (Time)DATE 3-30-88  
(Mo) (Day) (Yr)

REC'D BY F. Stoop

EXTL

(Office)

## INCIDENT REPORT BY:

Name: Scott Paves Phone: (201) 561-1100  
Street: 200 S. Clinton Road  
City: Newark State: NJ  
Affiliation/Title: \_\_\_\_\_

## INCIDENT LOCATION:

Name (Site): New York State Thruway Facility: \_\_\_\_\_ Other: \_\_\_\_\_  
Street: \_\_\_\_\_ Phone: \_\_\_\_\_  
City: New York County: Middlesex State: NJ Zip Code: \_\_\_\_\_  
Date of Incident: 3-30-88 Time: 1200 AM  
(Mo) (Day) (Yr)

## IDENTITY OF SUBSTANCE(S) SPILLED, RELEASED, ETC.:

Name of Substance(s) (Gas, Liquid, Solid): Corrosive liquid Known Suspected Unknown

CAS Number: \_\_\_\_\_

Amount Released/Spilled: 100 gal Actual Potential Estimated

Substance Contained (Y/N/U)

Type of Release/Spill: \_\_\_\_\_ Terminated \_\_\_\_\_ Continuous \_\_\_\_\_ Intermittent

Hazardous Material (Y/N)

## NATURE OF INCIDENT:

Complaint \_\_\_\_\_ Munc. Notification \_\_\_\_\_ Emergency \_\_\_\_\_ Sub. 20 \_\_\_\_\_

## INCIDENT DESCRIPTION:

Fire \_\_\_\_\_ Explosion \_\_\_\_\_ Air Rel \_\_\_\_\_ Spill \_\_\_\_\_ MVA \_\_\_\_\_ Derailment \_\_\_\_\_ Smoke/Dust \_\_\_\_\_  
Odors \_\_\_\_\_ Sewage \_\_\_\_\_ NJPOES \_\_\_\_\_ Noise \_\_\_\_\_ Illegal Dumping \_\_\_\_\_  
Equip Start-up/Shutdown, Equip Fail/Upset, etc. \_\_\_\_\_  
Other (specify) \_\_\_\_\_

Injuries (Y/N/U)

Facility Evacuation (Y/N/U)

Contamination of Air \_\_\_\_\_ Land \_\_\_\_\_ Water \_\_\_\_\_

Potable Water Source (Y/N/U)

Receiving Water \_\_\_\_\_

Location Type: \_\_\_\_\_ Residential \_\_\_\_\_ Industrial \_\_\_\_\_ Rural \_\_\_\_\_ Sensitive Population (Hosp, School, Nurs. Home)

Public Exposure (Y/N/U)

Police at Scene (Y/N/U)

Assistance Requested (Y/N/U)

Wind Direction/Speed \_\_\_\_\_

Precipitation (rain/snow) \_\_\_\_\_

## STATUS AT INCIDENT SCENE

50 gal drums loaded - onto ground

## RESPONSIBLE PARTY:

Company Name \_\_\_\_\_ Known \_\_\_\_\_ Suspected \_\_\_\_\_ Unknown \_\_\_\_\_

Contact \_\_\_\_\_ Title \_\_\_\_\_ Phone \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ County \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

## OFFICIALS NOTIFIED (Name/Title):

NJSP: \_\_\_\_\_ / \_\_\_\_\_ Phone \_\_\_\_\_ Date/Time \_\_\_\_\_ (T/M)  
Local Health: \_\_\_\_\_ / \_\_\_\_\_ Phone \_\_\_\_\_ Date/Time \_\_\_\_\_ (T/M)  
Local Munc: \_\_\_\_\_ / \_\_\_\_\_ Phone \_\_\_\_\_ Date/Time \_\_\_\_\_ (T/M)  
USEPA: \_\_\_\_\_ / \_\_\_\_\_ Phone \_\_\_\_\_ Date/Time \_\_\_\_\_ (T/M)

## INCIDENT REFERRED TO:

DEQ \_\_\_\_\_ DWR \_\_\_\_\_ DSWM \_\_\_\_\_ DHSM \_\_\_\_\_ DHWM \_\_\_\_\_ DOH \_\_\_\_\_ DES \_\_\_\_\_ DEP \_\_\_\_\_ DCJ \_\_\_\_\_ DCR \_\_\_\_\_

Region: \_\_\_\_\_ Northern \_\_\_\_\_ Metro \_\_\_\_\_ Central \_\_\_\_\_ Southern \_\_\_\_\_ ERT \_\_\_\_\_ EBT \_\_\_\_\_

1. Name/Affil \_\_\_\_\_ / \_\_\_\_\_ Phone \_\_\_\_\_ Date/Time \_\_\_\_\_ (T/M)

2. Name/Affil \_\_\_\_\_ / \_\_\_\_\_ Phone \_\_\_\_\_ Date/Time \_\_\_\_\_ (T/M)

3. Name/Affil \_\_\_\_\_ / \_\_\_\_\_ Phone \_\_\_\_\_ Date/Time \_\_\_\_\_ (T/M)

## IMMEDIATE DEP RESPONSE (Y/N)

[Emergency (Y/N)]

[Emergency (Y/N)]

## COMMENTS

TO: Mr. Paves - 100 gal drums loaded - onto ground  
1135 - 200 S. Clinton Road - Newark, NJ 07102

COPIES:

White - Lead Agency

Blue - County Office

Green - DEP

Yellow - Other

REFERENCE 43

Form DEP-021A  
10/87NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIV. OF ENVIRONMENTAL QUALITY - BUR. OF COMMUNICATIONS AND SUPPORT SERVICES  
Phone: 609-292-7172

TO LOG# 2536

## COMMUNICATIONS CENTER NOTIFICATION REPORT

CASE NO. 88-04-08-2217  
(Yr) (Mo) (Day) (Time)

DATE	04-08-88	REC'D BY	Simicsak	REVIEWED BY	James Simicsak
<b>INCIDENT REPORT BY:</b>					
Name	Sgt. Rngalwk1	Phone	201-755-0700		
Street					
City	South Plainfield	Middlesex Coun. ly	State	N.J.	
Affiliation/Title	South Plainfield P.D.				
<b>INCIDENT LOCATION:</b>					
Name (Site)	Metz Metallurgical	Phone			
Street	South Clinton Ave				
City	South Plainfield	County	Middlesex	State	N.J.
Zip Code					
Date of Incident	04-08-88	Time	2210		
<b>IDENTITY OF SUBSTANCE(S) SPILLED, RELEASED, ETC.:</b>					
Name of Substance(s) (Gas, Liquid, Solid):	Known Suspected X Unknown				
CAS Number:					
Amount Released/Spilled	Actual Potential Estimated				
Substance Contained (Y/N/U)					
Type of Release/Spill:	Terminated X Continuous Intermittent				
Hazardous Material (Y/N)					
<b>NATURE OF INCIDENT:</b>					
Complaint X Munc. Notification Emergency Regl. Notification					
<b>INCIDENT DESCRIPTION:</b>					
Fire Explosion Air Rel Spill MVA Derailment Smoke/Dust					
Odors Sewage H/PDES Noise Illegal Dumping Waste					
Equip Start-up/Shutdown, Equip Fail/Upset, etc.					
Other (specify):					
Injuries (Y/N/U)	Public Exposure (Y/N/U)				
Facility Evacuation (Y/N/U)	Police at Scene (Y/N/U)				
Public Evacuation (Y/N/U)	Firearm at Scene (Y/N/U)				
Contamination of X Air Land Water	Assistance Required (Y/N/U)				
Potable Water Source (Y/N/U)	Wind Direction/Speed				
Receiving Water	Precipitation (rain/snow)				
Location Type: X Residential X Industrial Rural	Sensitive Population (Hosp, School, Nurs. Home)				
<b>STATUS AT INCIDENT SCENE</b> Plant fully involved in fire. Smoke is impacting Rt. 287.					
<b>RESPONSIBLE PARTY:</b>					
X Known Suspected Unknown					
Company Name	Metz Metallurgical				
Contact	Title				
Street	South Clinton Ave				
City	South Plainfield	County	Middlesex	State	N.J.
Zip Code					
<b>OFFICIALS NOTIFIED (Name/Time):</b>					
NJSP: Sgt. Anthony	/ NJSP	Phone	882-2000	Date/Time	4/8 / 2240 (Y/N)
Local Health Rich Kosub	/ Midl. Haz/Mat	Phone	201-745-4400	Date/Time	4/8 / 2245 (Y/N)
Local Muni:	/	Phone		Date/Time	(Y/N)
USEPA: Ensign Penny	/ US EPA NRC	Phone	800-424-8802	Date/Time	4/8 / 2247 (Y/N)
<b>INCIDENT REFERRED TO:</b>					
X DEB DWR DWM DHSM X DHWM DDM DFG OFF DCJ DCR					
Region:	Northern Metro Central Southern ERT X ER2				
1. Name/AMN Jim Manuel	/ Reg. 2	Phone	HOME	Date/Time	4/8 / 2222 (Y/N)
2. Name/AMN	/	Phone		Date/Time	(Y/N)
3. Name/AMN	/	Phone		Date/Time	(Y/N)
<b>IMMEDIATE DEP RESPONSE (Y/N)</b> [Emergency (Y/N)] [Enforcement (Y/N)]					

COMMENTS Resp. 22 and 26 Galen McCreary and Priit Pals are responding to scene at 2245 Hrs.  
23:42 Scott Eyes of Metz Metallurgical Manager Environmental Dept. Notified Trenton  
Dispatch of Fire at facility, and he is responding to site. Resp. 20-26-10-9 2349 A.K.  
907 RESP. 22 STOPS CHEM INJURY IN FIRE: METHANOL 30 WEIGHT OIL, AND PREVIOUS METALS.  
THREE (3) MINOR INJURIES DUE TO FLASHOVER FROM FIRE, ALL TREATED AND RELEASED.  
White - Lead Agency Yellow - Comm. Center Pink - A310 Gold - Bureau - Chief



REFERENCE 44

Logged 12-22-07 Ray

# HANNOCH WEISMAN

A PROFESSIONAL CORPORATION  
COUNSELLORS AT LAW

4 BECKER FARM ROAD

ROSELAND, NEW JERSEY 07068-3788

(201) 535-5300

TELECOPIER

(201) 994-7198

PLEASE REPLY TO:

P.O. BOX 1040

NEWARK, NJ 07101-9819

N.Y. TELEPHONE

(212) 732-3262

WRITER'S DIRECT LINE: (201) 535-

ROBERT P. ZOLLER  
JOHN MELICHAREK, JR.  
ANDREW J. STAMELMAN  
KEVIN J. BRUNO  
NANCY LEM  
MIRIAM E. CAHN  
JACK GILLMAN  
MARY ELLEN SCHEUER  
THOMAS L. WEISENBECK  
DAVID OWEN  
KEVIN F. MURPHY  
RICHARD M. SLOTKIN  
MICHAEL G. KEATING  
JOHN M. SIMON  
JEFFREY B. LEHRER  
DAVID C. BERMAN  
JEFFREY W. POMPEO  
MICHAEL KURAK  
NANCY B. ROHN  
MARY ANN WALKER COLLINS  
GERALYN G. HUMPHREY  
LAWRENCE W. DIAMOND  
SUSAN N. MILCH  
JEFFREY A. COHEN  
RICHARD S. FINKELSTEIN  
JAMES J. SCOTT  
BRIAN W. KRONICK

RONALD S. LADELL  
SHIRLEY L. BERGER  
JAN C. WALKER  
GREGORY J. BATTISTA  
SANDRA L. COHEN  
PATRICIA T. LEUZZI  
DEBORAH S. KINBURN  
ALLAN L. ROSENBLATT  
SUNIL K. GARG  
SUSAN R. RUBRIGHT  
ANDREA F. WAGNER  
EDWARD F. MCTIERNAN  
GREGG E. CLIFTON  
ROBERT E. SANDLER  
BARBARA A. MESEROLE  
DENNIS H. SABBOURIN  
MARC S. GELLER  
DIANE P. SULLIVAN  
JAMES M. FISCHER  
GAIL E. GOVELITZ  
TOMAS ESPINOSA  
ROZLYN L. ANDERSON  
BRETT K. KATES  
DANIEL I. WARD  
DAVID L. EPSTEIN  
RICHARD P. FLAUM  
AMY M. RIEL

HERBERT J. HANNOCH  
(1911-1983)

MILTON M. STERN  
ALBERT G. BESSER  
BERNARD S. BERKOWITZ  
JAMES P. DUGAN  
RONALD M. STURTZ  
CARL G. WEISENFELD  
ROBERT J. DEL TUFO  
JAMES J. SHRAGER  
ASHLEY STEINHART  
DEAN A. GAVER  
JOSEPH J. FLEISCHMAN  
ELLEN B. KULKA  
BERNARD J. DAVELLA, JR.  
SANDERS M. CHATTMAN  
STEVEN C. LEVITT  
STEPHEN P. LICHTSTEIN  
IRA B. MARCUS  
ANTHONY J. MARCHETTA  
WILLIAM W. ROBERTSON

TODD M. SAHNER  
IRVIN M. FREILICH  
ROBERT C. EPSTEIN  
THEODORE MARGOLIS  
CARLETON RICHARD KEMPH  
LAWRENCE T. NEHER  
ARLENE ELGART MIRSKY  
GENE R. KORF  
JONATHAN M. GROSS  
SHELDON M. FINKELSTEIN  
RICHARD J. CONWAY, JR.  
MICHAEL L. ROSENBERG  
A. PATRICK NUCCIARONE  
PETER B. BENNETT  
GERALD C. HARVEY  
OF COUNSEL  
JOSEPH A. WEISMAN  
WILLIAM J. HELLER  
CARMINE A. IANNACCONE  
HOWARD A. KANTROWITZ

September 1, 1988

Mr. Vincent Krisak  
Division of Hazardous Waste Management  
Central Field Office  
Twin Rivers Professional Building  
East Windsor, New Jersey 08520

Re: Right to Know Request  
Metz Metallurgical Corporation ("Metz")  
3900 South Clinton Avenue  
Middlesex County  
South Plainfield, NJ 07080 ("the Site")

Dear Mr. Krisak:

This letter constitutes a request pursuant to the Right to Know law, 47 N.J.S.A. 1A-1, et seq., for any and all documents pertaining to any activities, investigations and/or research undertaken by the New Jersey Department of Environmental Protection ("NJDEP") regarding the above-captioned site, including but not limited to:

1. Any permit, or denial decision for same, issued to Metz or to the DeGrassa Corporation ("DeGrassa"), the parent corporation of Metz, for activities at the Site, including all applications, reports, studies, investigations, monitoring data and sampling results submitted in support of obtaining such permits or in compliance thereof;
2. Any enforcement notices, requests for information, demand letters, and/or directives issued to Metz or to DeGrassa;

# HANNOCH WEISMAN

A PROFESSIONAL CORPORATION

Mr. Vincent Krisak  
September 1, 1988  
Page 2

3. Any administrative consent orders or similar agreement to undertake remedial activities at the Site;
4. Any reports, studies, monitoring data or sampling results submitted in connection with remedial activities at the Site;
5. Any notice letters or notifications relating to discharge(s) at the Site, submitted under the provisions of any statute or regulation requiring the reporting of such a discharge;
6. Any fines, penalties or other assessments levied against Metz or DeGrassa for any activities at the Site.

As required by the Right to Know law and the pertinent case law, we expect that NJDEP's record search will be thorough and diligent and will include archives where records within the ambit of this request may reasonably exist.

We are prepared to reimburse the agency for costs in accordance with N.J.S.A. 47:1A-2.

Please feel free to contact me to discuss this request.

Very truly yours,

HANNOCH WEISMAN  
A Professional Corporation

By Jennifer A. Griffith  
Jennifer A. Griffith  
Law Clerk

JAG/mes

cc: Gerald Burke, NJDEP

REFERENCE 45

CASE NO. 99-03-30-1329  
(Yr) (Mo) (Day) (Time)DATE 12-31-99 REC'D BY TIME 1330  
(Mo) (Day) (Yr)

## INCIDENT REPORT BY:

Name John S. Jones Phone 201-551-1100

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Affiliation/Title Met. Meteorologist

## INCIDENT LOCATION:

Transportation \_\_\_\_\_ Facility \_\_\_\_\_ Other: \_\_\_\_\_

Name (Site): Met. Meteorologist Phone \_\_\_\_\_Street 2900 S. ClintonCity Plainfield County Middlesex State N.J. Zip Code \_\_\_\_\_Date of Incident: 12-31-99 Time: 1300  
(Mo) (Day) (Yr)

## IDENTITY OF SUBSTANCE(S) SPILLED, RELEASED, ETC.:

Suspected \_\_\_\_\_ Unknown \_\_\_\_\_

Name of Substance(s) [Gas, Liquid, Solid]: Thermal 55 (1st transfer 21)Amount Released/Spilled 5 gal Actual \_\_\_\_\_ Potential \_\_\_\_\_ Estimated \_\_\_\_\_ Substance Contained: Y (N) U

Type of Release/Spill: \_\_\_\_\_ Terminated \_\_\_\_\_ Continuous \_\_\_\_\_ Intermittent \_\_\_\_\_ Hazardous Material: (Y) (N) U

## INCIDENT DESCRIPTION:

Fire \_\_\_\_\_ Explosion \_\_\_\_\_ Air Rel \_\_\_\_\_ Spill ☒ MVA \_\_\_\_\_ Derailment \_\_\_\_\_ Smoke/Dust \_\_\_\_\_

Odors \_\_\_\_\_ Sewage \_\_\_\_\_ NJPDES \_\_\_\_\_ Noise \_\_\_\_\_ Wildlife \_\_\_\_\_ Illegal Dumping \_\_\_\_\_ Drums \_\_\_\_\_

Equip Start-Up/Shutdown, Equip Fail/Upset, etc. \_\_\_\_\_

Other (specify) \_\_\_\_\_

Injuries Y (N) U Public Exposure: Y (N) U

Facility Evacuation Y (N) U Fire Department at Scene: Y (N) U

Population Evacuation Y (N) U Police at Scene: Y (N) U

Potable Water Source Y (N) U Assistance Requested: Y (N) U

Contamination of Air ☒ Land ☒ Water \_\_\_\_\_ Precipitation Y (N) UReceiving Water Small Pond Wind Direction/Speed 1

Location Type: \_\_\_\_\_ Residential \_\_\_\_\_ Industrial \_\_\_\_\_ Commercial \_\_\_\_\_ Rural \_\_\_\_\_ Sensitive Population (Hosp., School, Nurs. Home) \_\_\_\_\_

STATUS AT INCIDENT SCENE Spill contained & cleanup performed. 5. Plainfield HD responded.

## RESPONSIBLE PARTY:

Suspected \_\_\_\_\_ Unknown \_\_\_\_\_

Company Name see I/O Phone \_\_\_\_\_

Contact \_\_\_\_\_ Title \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ County \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

## OFFICIALS NOTIFIED (Name/Title):

NJSP: By T.O. / \_\_\_\_\_ Phone \_\_\_\_\_ Date/Time \_\_\_\_\_ / \_\_\_\_\_ (T/M)Local Health: By T.O. / Middlesex Health Dept Phone 201-338-3820 Date/Time 3/3/99 / 1402 (T/M)Local Munic: By T.O. / \_\_\_\_\_ Phone \_\_\_\_\_ Date/Time \_\_\_\_\_ / \_\_\_\_\_ (T/M)

USEPA: \_\_\_\_\_ / \_\_\_\_\_ Phone \_\_\_\_\_ Date/Time \_\_\_\_\_ / \_\_\_\_\_ (T/M)

## INCIDENT REFERRED TO:

DEQ \_\_\_\_\_ DWR \_\_\_\_\_ DSWM \_\_\_\_\_ DHSM ☒ DHWM \_\_\_\_\_ DOH ☒ DFG \_\_\_\_\_ OPF \_\_\_\_\_ DCJ \_\_\_\_\_ DCR \_\_\_\_\_Region: \_\_\_\_\_ Northern \_\_\_\_\_ Metro ☒ Central \_\_\_\_\_ Southern \_\_\_\_\_ ER1 \_\_\_\_\_ ER2 \_\_\_\_\_ BUST \_\_\_\_\_

1. Name/Affil \_\_\_\_\_ / \_\_\_\_\_ Phone \_\_\_\_\_ Date/Time \_\_\_\_\_ / \_\_\_\_\_ (T/M)

2. Name/Affil \_\_\_\_\_ / \_\_\_\_\_ Phone \_\_\_\_\_ Date/Time \_\_\_\_\_ / \_\_\_\_\_ (T/M)

3. Name/Affil \_\_\_\_\_ / \_\_\_\_\_ Phone \_\_\_\_\_ Date/Time \_\_\_\_\_ / \_\_\_\_\_ (T/M)

## DEP RESPONSE

Emergency \_\_\_\_\_ Immediate \_\_\_\_\_ Priority \_\_\_\_\_ No Response \_\_\_\_\_

## COMMENTS

Spill contained & cleanup performed. 5. Plainfield HD responded.

REFERENCE 46

PRELIMINARY ASSESSMENT  
OFF SITE RECONNAISSANCE  
INFORMATION REPORTING FORM

Date: 7/25/89

Site Name: METZ METALLURGICAL

TDD: 02-8906-34-FA

Site Address: 3900 S. CLINTON AVE.  
Street, Box, etc.

SOUTH PLAINFIELD  
Town

MIDDLESEX  
County

NEW JERSEY  
State

NUS Personnel:	Name	Discipline
	<u>J. FROST</u>	<u>BIOLOGY</u>
	<u>J. BULICH</u>	<u>CHEMISTRY</u>

Weather Conditions (clear, cloudy, rain, snow, etc.):

HAZY, HOT, HUMID

Estimated wind direction and wind speed: SEW 5 mph

Estimated temperature: 87°F

Signature: James C. Frost Date: 7/25/89

Countersigned: John Bulich Date: 7/25/89

PRELIMINARY ASSESSMENT  
INFORMATION REPORTING FORM

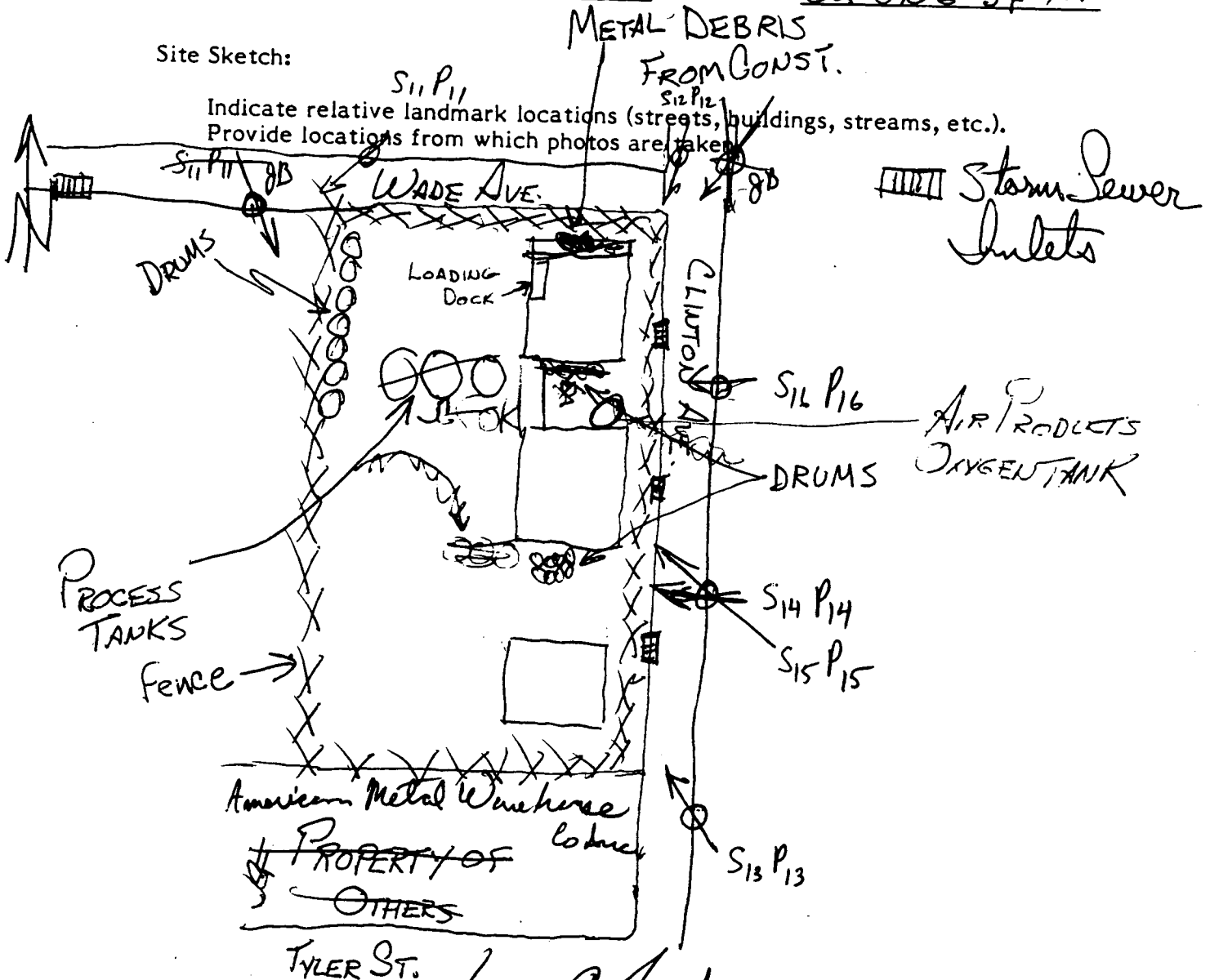
Date: 7/25/89

Site Name: METZ METALLURGICAL

TDD: 02-8906-34-74

Site Sketch:

Indicate relative landmark locations (streets, buildings, streams, etc.).  
Provide locations from which photos are taken.



Signature: James C. Frank Date: 7/25/89

Countersigned: John Bulich Date: 7/25/89



PRELIMINARY ASSESSMENT  
INFORMATION REPORTING FORM

Date: 7/25/89

Site Name: METZ METALLURGICAL

TDD: 02-8906-34-PA

Notes (Periodically indicate time of entries in military time):

Site arrival 1104 hours. Site is very large and active. About <sup>30</sup> drums were observed along the western fence near the NW corner. No other units observed. Security is very good. The site is fenced and TV surveillance cameras are provided. The drums are sitting on pallets which are sitting on gravel. Contents of the drums is unknown. Site slopes to west and at the southern end of property slope may be greater than 5-10%. Storm sewer intake observed on Clinton Ave. and Abbe Ave. A stream may be present 500 feet to the west but due to undergrowth its unknown. No residential areas are near the site. The area is light industrial/commercial use. No migration of contaminants off site was observed. No stressed vegetation or dead animals could be

Signature: James C. Frost

Date: 7/25/89

Countersignature: John F. Bulich

Date: 7/25/89

PRELIMINARY ASSESSMENT  
INFORMATION REPORTING FORM

Date: \_\_\_\_\_

Site Name: METZ METALLURGICAL

TDD: 02-806-34-PA

Notes (Cont'd):

seen. Soil appears to reddish clayey with  
some sand. Further investigation revealed  
8-10 drums between Bldgs A & B. Contents  
unknown.

Attach additional sheets if necessary. Provide site name, TDD number, signature,  
and countersignature on each.

Signature: James C. Frost

Date: 7/25/89

Countersignature: John Bulky

Date: 7/25/89

PRELIMINARY ASSESSMENT  
INFORMATION REPORTING FORM

Date: 7/25/89

Site Name: METZ METALLURGICAL TDD: 02-8906-34-PA

Photolog:

Frame/Photo Number	Date	Time	Photographer	Description
<u>S<sub>11</sub> P<sub>11</sub></u>	<u>7/25/89</u>	<u>1134</u>	<u>J. Frost</u>	<u>NW corner showing</u>
<u>S<sub>12</sub> P<sub>12</sub></u>	<u>7/25/89</u>	<u>1138</u>	<u>"</u>	<u>drum storage area</u>
<u>S<sub>13</sub> P<sub>13</sub></u>	<u>7/25/89</u>	<u>1141</u>	<u>"</u>	<u>East of complex from</u>
<u>S<sub>14</sub> P<sub>14</sub></u>	<u>7/25/89</u>	<u>1142</u>	<u>"</u>	<u>Clinton and Wade</u>
<u>S<sub>15</sub> P<sub>15</sub></u>	<u>7/25/89</u>	<u>1143</u>	<u>"</u>	<u>BLDG B from Clinton Ave</u>
<u>S<sub>16</sub> P<sub>16</sub></u>	<u>7/25/89</u>	<u>1144</u>	<u>"</u>	<u>Area south of BLDG A</u>
				<u>Area south of BLDG A</u>
				<u>BLDG A from Clinton Ave</u>
				<u>BLDG A from Clinton Ave</u>
				<u>Area between BLDG A</u>
				<u>&amp; BLDG UNDER CONSTRUCTION</u>

Attach additional sheets if necessary. Provide site name, TDD number, signature, and countersignature on each.

Signature:

Countersignature:

Date:

Date:

REFERENCE 47

GEMS> I

METZ METALLURGICAL

LATITUDE 40:34: 0 LONGITUDE 74:25:49 1980 POPULATION

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	0	116	8289	25070	43338	69535	146348
RING TOTALS	0	116	8289	25070	43338	69535	146348

GEMS> I

METZ METALLURGICAL

LATITUDE 40:34: 0 LONGITUDE 74:25:49 1980 HOUSING

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	0	40	3217	7749	13463	21491	45960
RING TOTALS	0	40	3217	7749	13463	21491	45960

DISTANCE	POP.	HOUSING
0.25 *	0	0
0.50	116	40
1.00	8405	3257
2.00	33475	11006
3.00	76813	24469
4.00	146348	45960

VERIFICATION OF NO RESIDENTIAL POPULATION WITHIN  $\frac{1}{4}$  MILE OF THE SITE WAS MADE DURING THE OFF-SITE INSPECTION AND REFERRING TO TOPO MAPS OF THE AREA.

REFERENCE 48



MIDDLESEX  
WATER COMPANY /

1500 Ronson Road, Woodbridge Township, Iselin, New Jersey 08830  
201 - 634-1500

Mailing Address  
P.O. Box 1500  
Iselin, New Jersey 08830

October 21, 1985

Mr. David J. Grupp  
NUS Corporation  
Raritan Plaza III,  
Fieldcrest Avenue  
Edison, New Jersey 08837

Dear Mr. Grupp:

In response to your letter of October 8, 1985 requesting information on our Park Avenue well field, following are the answers to your questions:

1. Number of wells: See attached.
2. Aquifer at which screened: See depths on attached.
3. Population served: 196,888 as of 12/31/84.
4. Depth of wells: See tabulation on attached.
5. Gallons pumped per day: Average of 5,155,000 per day.

Yours very truly,

MIDDLESEX WATER COMPANY

*J. Richard Tompkins*  
J. Richard Tompkins  
President

JRT:ne

Attachment

cc: H. T. Grundmann  
J. A. Ritter

(Doc. 0429B)

RECEIVED

OCT 22 1985

NUS CORPORATION  
REGION II  
SENT TO \_\_\_\_\_

## SURFACE WATERS

NAME OR LOCATION OF SOURCE OR RESERVOIR (a)	DAM			INTAKES			LENGTH OF INTAKE (b)	FLOW LINE ELEVATION (i)	WITHDRAWAL IN MILLION GALLONS PER DAY				WATER SURFACE AREA (Acres) (n)	RESERVOIR CAPACITY MILLION GALLONS (o)	YEAR IN SERV- ICE (p)
	KIND OR TYPE (b)	LENGTH (FT.) (c)	CENTER HT. (FT.) (d)	NO. (e)	KIND (f)	SIZE (g)			MAXIMUM		MINIMUM				
									MONTH (j)	QUAN. (k)	MONTH (l)	QUAN. (m)			
Robinson's Branch (Earth and Concrete)	-	550	25	1	Cast Iron	24"	50'	44.0	-	-	-	-	94	232	1906
Delaware and Raritan Canal	-	-	-	2	Conc	54"	56'	14.0	Nov.	21.3	Jan.	7.1	-	-	1969

Aggregate Total Average Daily Withdrawal 13.395 Million Gals.

## GROUND WATERS

NO.	LOCATION OF SOURCE OF SUPPLY (a)	TYPE OF SOURCE (b)	EACH GROUP (c)	DIMENSIONS OF COLLECTORS, WELLS OR GALLERIES		DEPTH FROM GROUND SURFACE TO WATER LEVEL		WITHDRAWAL IN THOUSAND GALLONS PER DAY				YEAR IN SERV- ICE (l)
				DIAM. OR SIZE (d)	LENGTH OR DEPTH (e)	STATIC LEVEL (f)	PUMPING LEVEL (g)	MAXIMUM		MINIMUM		
								MONTH (h)	QUANTITY (i)	MONTH (j)	QUANTITY (k)	
				Inches	Feet							
1	Park Ave-So. Plfd.	Well #14	1	10	259	Varies	Varies)	(Observation Well - 1965)				1927
2	" " " "	Well #18	1	12	74	"	" )					1946
3	" " " "	Well #19	1	12	76	"	" )					1946
4	" " " "	Well #20	1	12	82	"	" )					1948
5	" " " "	Well #21	1	12	73	"	" )					1950
6	" " " "	Well #22	1	12	514	"	" )					1961
7	" " " "	Well #23	1	18	74	"	" )					1961
8	" " " "	Well #24	1	24)	58)	"	" )					1964
9	" " " "			20)	10)	"	" )					
10	" " " "			12)	35)	"	" )					
11	" " " "	Well #25	1	12	448	"	" )					1965
12	" " " "	Well #26	1	12	495	"	" )					1965
13	" " " "	Well #27	1	12	501	"	" )					1965
14	" " " "	Well #28	1	12	500	"	" )					1965
15	" " " "	Well #29	1	12	500	"	" )					1965
16	" " " "	Well #30	1	12	500	"	" )					1966
17	" " " "	Well #31	1	12	500	"	" )					1966
18	" " " "	Well #32	1	12	501	"	" )	Aug.	7,979	March	9	1966
19	(Continued on Page 48A)											

Aggregate Total Average Daily Withdrawal (See Page 48A) Thousand Gals.



REFERENCE 49

CONTROL NO:

DATE:

April 14, 1989

TIME:

12:00

DISTRIBUTION:

BETWEEN:

Ed O'Rourke

OF: City of New Brunswick

Water Department

PHONE:

(201) 745-5060

AND:

Joseph Dvorak

(NUS)

DISCUSSION:

I talked with Ed O'Rourke about water (public) use in New Brunswick. He said that their water system uses no wells whatsoever. They get surface water from two places. They have 10.5 million gallons per day of water rtes from the NJ Water Supply Authority, and that water comes from a surface water intake on the Delaware and Raritan Canal. The surface water intake is located along Georges Street behind Buccleuch Park.

The other surface water intake they get water from is located on Farrington Lake and they have 10 million gallons per day water rtes from that lake. The intake is located near the intersection of Burnett and Edgebrook Road.

They serve approximately 50,000 people, including Rutgers University.

ACTION ITEMS:

4/14/89

REFERENCE 50



# ecology and environment, inc.

300 McGAW DRIVE, RARITAN CENTER, 2ND FLOOR, EDISON, NEW JERSEY 08837, TEL. 201-225-9659

International Specialists in the Environmental Sciences

## MEMORANDUM

TO: Fred N. Rubel, Chief - Hazard Response Branch, U.S. EPA

FROM: John Bee, TAT - Region II

SUBJECT: Report of Pesticide Groundwater Problem, South Plainfield, New Jersey

DATE: July 28, 1981

A report was passed on to me by a clean up contractor used by the U.S. EPA that there is pesticide residue buried under the site of the Ortho Manufacturing facility on Metuchen Road, South Plainfield: in particular under the soil beside the railway spur at the back of the property. The clean up supervisor noted that upon excavation of the soil with a backhoe in the catch basin and rail unloading area a technical ooze contaminated with pesticides would be found. DDT, DDE, BNC, chlorodane and toxaphene are alledged to be in the ooze. In addition, it was alledged that captan, phalthan, and organophosphates contaminated floor sweepings have been placed in fiber drums and dumped in the local municipal dump on Kenneth Avenue.

Drinking water is obtained from shallow wells in the area.

JB:ls

ORTHO-CHEVRON facility

July 30, 1981

Referral No. 81-9

Potential Hazardous Waste Storage/Disposal Site

Fred N. Sabely, Chief  
Hazard Response Branch

John Frisco, Chief  
Hazard Assessment Section

Attached is a report which we received regarding a site which may warrant a hazardous waste site inspection:

Facility: Ortho Manufacturing / CHEVRON

Location: Metuchen Road  
South Plainfield, New Jersey

The attached is submitted for your evaluation.

Attachment

cc: Pesticides Branch

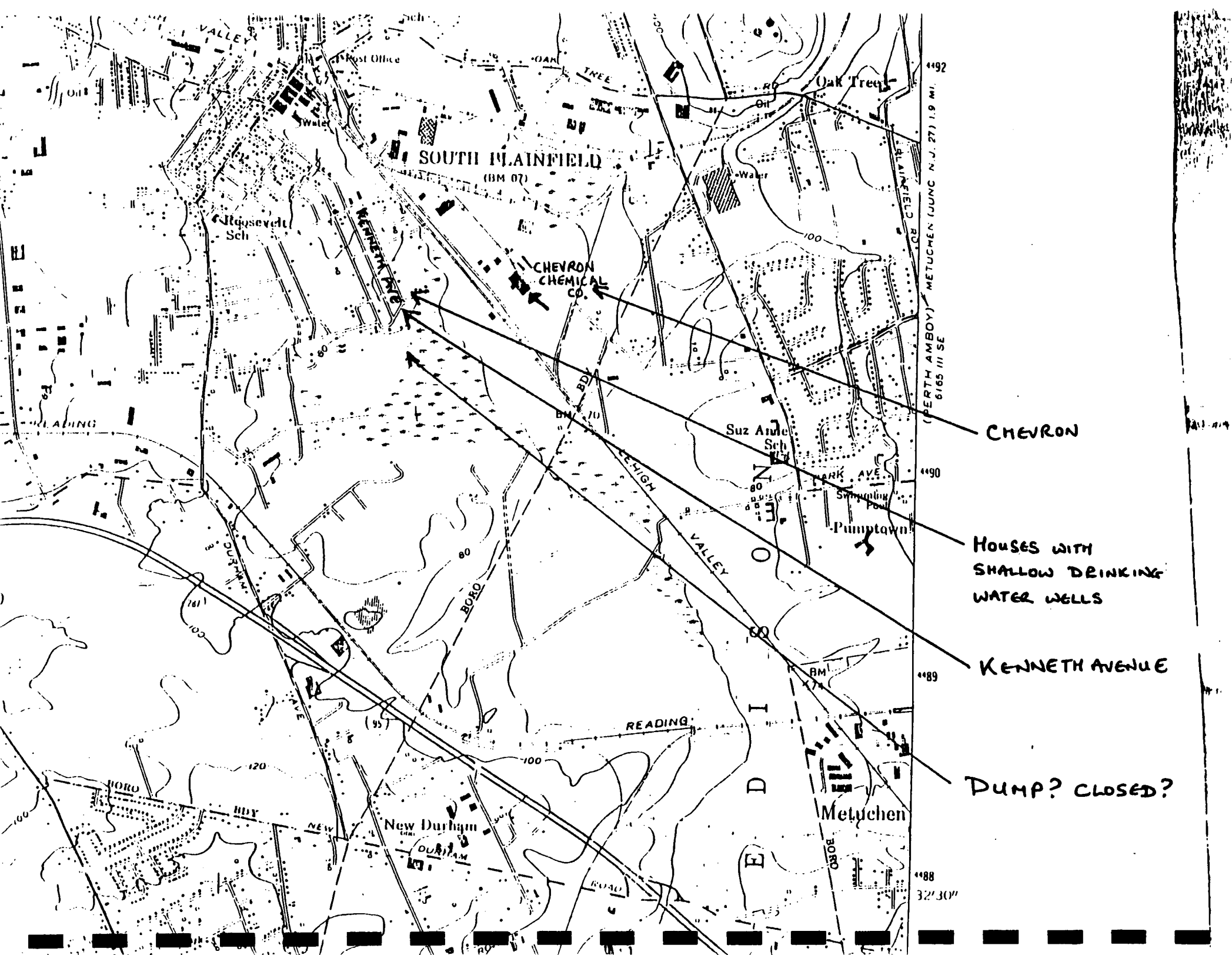
bcc: John Bee ✓

Fred,

Ed. Moore of the FIT has been tasked to investigate. He called me Dec. 3, 1981

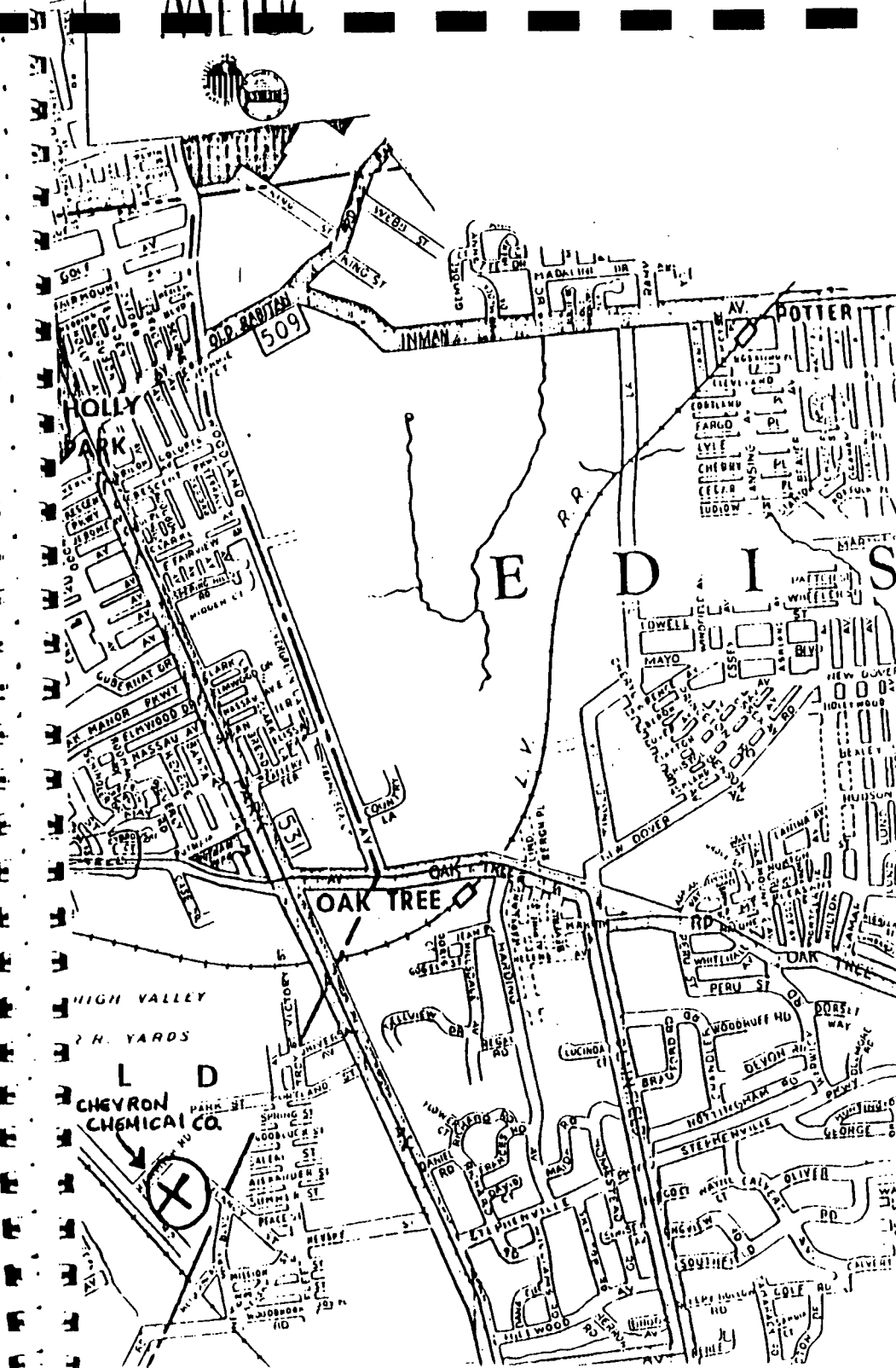
We recently did a SPCC of Facility  
under Chevron, South Plainfield.

John Bee



ity Since 1897

429 MAIN STREET METUCHEN, N.J. 08840 548 7400  
550 HOES LANE PISCATAWAY, N.J. 08854 463-8008



REFERENCE 51



CONTROL NO:

DATE:

7-14-59

TIME:

1000

DISTRIBUTION:

ERDA - New Brunswick Lab 02-8812-08

BETWEEN:

Mr. Vieser

OF:

Elizabethtown  
Water Company

PHONE:

(201) 654-1234

AND:

Joseph Diorak

(NUS)

DISCUSSION:

Elizabethtown Water Co. gets its water from ground water & surface water supplies. Approximately 15% of their water comes from ground water and the remaining 85% from surface water.

The groundwater comes from approximately 150 wells scattered throughout the distribution area. Mr. Vieser did not believe that any of the wells were located within  $\frac{1}{2}$  of a mile of the Raritan River in the vicinity of New Brunswick.

The surface water supplies come from the Raritan River, the Delaware and Raritan Canal, and the Millstone River. The majority of the water comes from the Delaware River, and the Millstone River is used only in emergencies. Three surface water intakes are located on the Delaware River, one is approx.  $\frac{1}{2}$  mile above the confluence of the Delaware and Millstone Rivers, and the other two are located right upstream of the confluence of the two rivers on the east and west bank. One surface water intake is located on the

ACTION/ITEMS:

Millstone River right upstream of the confluence of the Millstone and ~~Delaware~~ Delaware Rivers on the east bank, and the last surface water intake is located on the Delaware and Raritan Canal approx.  $\frac{1}{4}$  mile downstream of the confluence of the two rivers on the north side of the canal.

REFERENCE 52

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# **Uncontrolled Hazardous Waste Site Ranking System**

## **A Users Manual** (HW-10)

Originally Published in  
the July 16, 1982, *Federal Register*

United States  
Environmental Protection  
Agency

1984

TABLE 2  
PERMEABILITY OF GEOLOGIC MATERIALS\*

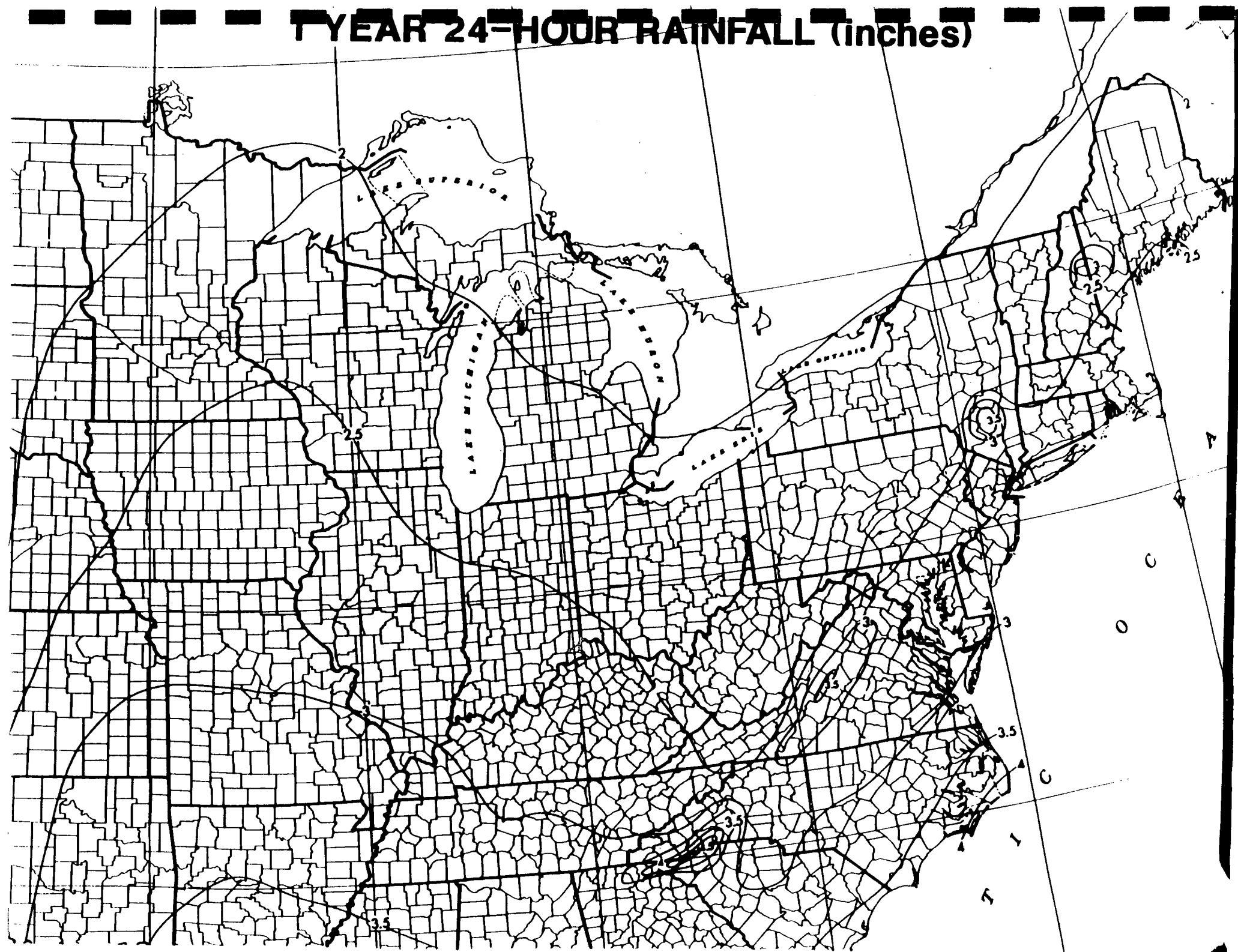
Type of Material	Approximate Range of Hydraulic Conductivity	Assigned Value
Clay, compact till, shale; unfractured metamorphic and igneous rocks	$<10^{-7}$ cm/sec	0
Silt, loess, silty clays, silty loams, clay loams; less permeable limestone, dolomites, and sandstone; moderately permeable till	$10^{-5} - 10^{-7}$ cm/sec	1
Fine sand and silty sand; sandy loams; loamy sands; moderately permeable limestone, dolomites, and sandstone (no karst); moderately fractured igneous and metamorphic rocks, some coarse till	$10^{-3} - 10^{-5}$ cm/sec	2
Gravel, sand; highly fractured igneous and metamorphic rocks; permeable basalt and lavas; karst limestone and dolomite	$>10^{-3}$ cm/sec	3

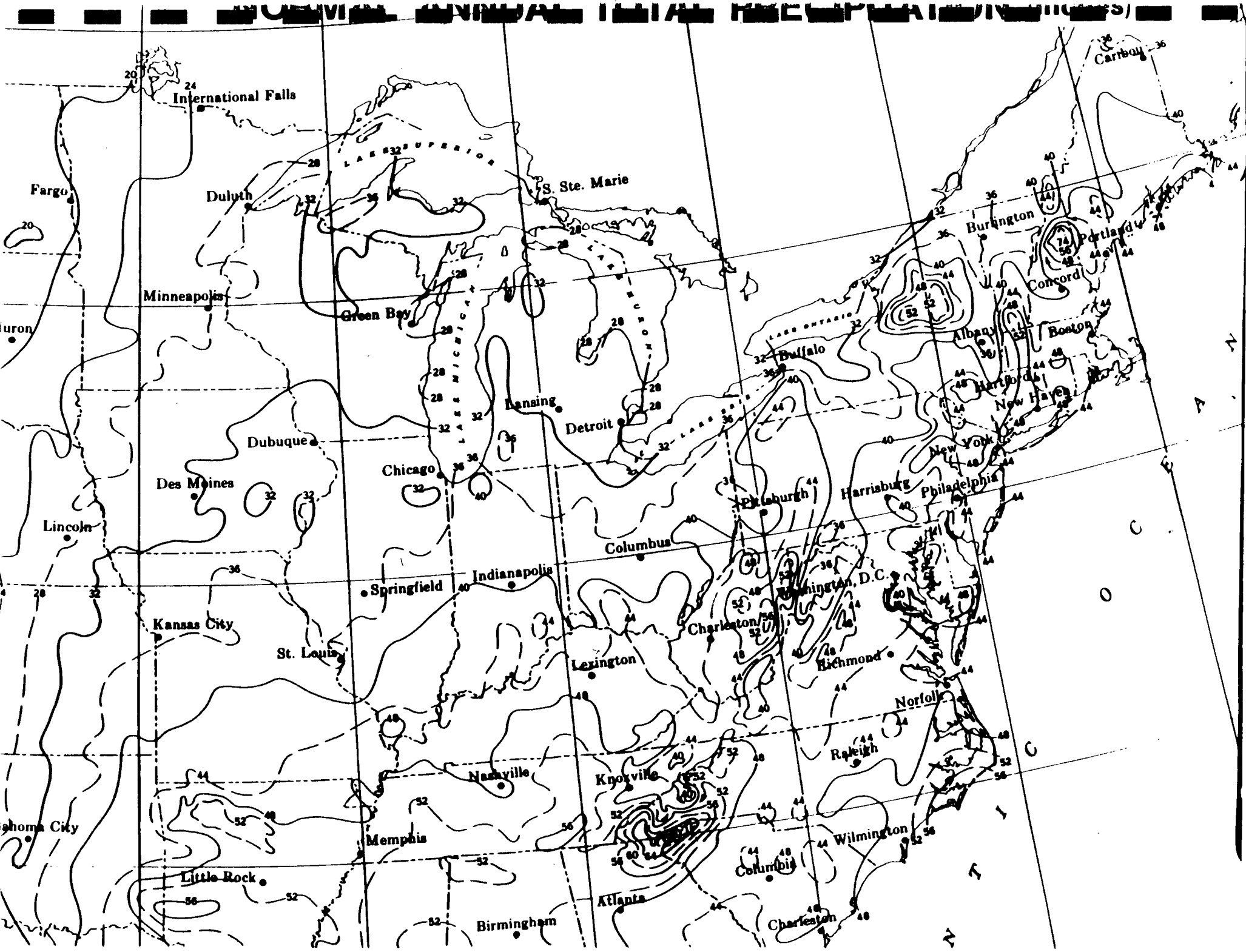
\*Derived from:

Davis, S. N., Porosity and Permeability of Natural Materials in Flow-Through Porous Media, R.J.M. DeWitt ed., Academic Press, New York, 1969

Freeze, R.A. and J.A. Cherry, Groundwater, Prentice-Hall, Inc., New York, 1979

# YEAR 24-HOUR RAINFALL (inches)





**MEAN ANNUAL LAKE EVAPORATION**  
(In Inches)

Based on period 1946-55

The map displays contour lines for mean annual lake evaporation across the United States. The values range from 20 inches in the northeast to over 80 inches in the southwest. Major cities labeled include Minneapolis, St. Paul, Chicago, Detroit, New York, Philadelphia, Washington, D.C., Atlanta, and Miami. The Gulf of Mexico is labeled at the bottom. An inset map shows Alaska and Hawaii.

**MEAN ANNUAL LAKE EVAPORATION**  
(In Inches)

Based on period 1946-55

The map displays contour lines for mean annual lake evaporation across the United States. The values range from 20 inches in the northeast to 80 inches in the southwest. Major cities labeled include Minneapolis, St. Paul, Chicago, Detroit, New York, Philadelphia, Washington, D.C., Atlanta, and Miami. The Gulf of Mexico is labeled at the bottom. An inset map shows Alaska and Hawaii.

REFERENCE 53





ATLAS OF  
NATIONAL WETLANDS INVENTORY MAPS  
FOR NEW JERSEY

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U.S. Fish and Wildlife Service  
Region 5  
1 Gateway Center, Suite 700  
Newton Corner, MA 02158

February 1984

## HOW TO USE THIS ATLAS

The Atlas contains reductions of all 1:24,000 National Wetlands Inventory maps. Maps appear in alphabetical order. Map names can be located on the index map (Figure 2). Each map shows the configuration, location and type of wetlands and deepwater habitats found within a given area.

### WETLAND LEGEND

Wetland data are displayed on maps by a series of letters and numbers (alpha-numerics). Mixing of classes and subclasses are represented by a diagonal line. The more common symbols are shown below; less common symbols have been omitted for simplicity. For identifying these latter symbols, the reader should refer to an actual NWI map legend.

#### Examples of Alpha-numerics:

E2EMN6	=	Estuarine (E), Intertidal(2), Emergent Wetland(EM), Regularly Flooded(N), Oligohaline(6)
E2FL	=	Estuarine(E), Intertidal(2), Flat(FL)
PF01	=	Palustrine(P), Forested Wetland(FO), Broad-leaved Deciduous(1)
PEM/OW	=	Palustrine(P), Emergent Wetland/Open Water(EM/OW)
PFO/SS1	=	Palustrine(P), Forested Wetland/Scrub-Shrub Wetland(FO/SS), Broad-leaved Deciduous(1)

#### SYMBOLOLOGY

##### Systems and Subsystems:

M 1	=	Marine Subtidal	R 3	=	Riverine Upper Perennial
M 2	=	Marine Intertidal	R 4	=	Riverine Intermittent
E 1	=	Estuarine Subtidal	L 1	=	Lacustrine Limnetic
E 2	=	Estuarine Intertidal	L 2	=	Lacustrine Littoral
R 1	=	Riverine Tidal	P	=	Palustrine
R 2	=	Riverine Lower Perennial	U	=	Upland

##### Classes (subclasses and modifiers designated where appropriate):

AB	=	Aquatic Bed
BB	=	Beach/Bar
EM	=	Emergent Wetland
EMN6	=	Emergent Wetland, Regularly Flooded, Oligohaline
EMP6	=	Emergent Wetland, Irregularly Flooded, Oligohaline
EMR	=	Emergent Wetland, Seasonally Flooded-Tidal
FL	=	Flat
FO1	=	Forested Wetland, Broad-leaved Deciduous
FO2	=	Forested Wetland, Needle-leaved Deciduous
FO4	=	Forested Wetland, Needle-leaved Evergreen
OW	=	Open Water/Unknown Bottom
SS1	=	Scrub-Shrub Wetland, Broad-leaved Deciduous
SS3	=	Scrub-Shrub Wetland, Broad-leaved Evergreen
SS4	=	Scrub-Shrub Wetland, Needle-leaved Evergreen
SS5	=	Scrub-Shrub Wetland, Dead
SS7	=	Scrub-Shrub Wetland, Evergreen

NATIONAL WETLANDS INVENTORY  
UNITED STATES DEPARTMENT OF THE INTERIOR



NEWARK NE  
NEWARK

SITE LOCATION  
APPROXIMATE 2 MILE RADIUS

PLAINFIELD NJ

40° 30'  
74° 22' 30"

REFERENCE 54



# Surface Water Classifications

## Surface Water Quality Standards

# INDEX E - Surface Water Classifications of the Raritan River and Raritan Bay Basin

ALLERTON CREEK (Allerton) - Entire length	FW2-NT
AMBROSE BROOK (Piscataway) - Entire length	FW2-NT
AMWELL LAKE (Snydertown)	FW2-NT(C1)
ASSISCONG CREEK (Flemington) - Entire length	FW2-NT
BACK BROOK (Vanliew's Corners) - Entire length	FW2-NT
BALDWINS CREEK (Pennington) - Entire length, except segment described separately below	FW2-NT
(Baldwin) - Segment within the boundaries of Baldwin Lake Wildlife Management Area	FW2-NT(C1)
BARCLAY BROOK (Redshaw Corners) - Entire length	FW2-NT
BEAVER BROOK (Cokesbury) - Source to Reformatory Road bridge	FW2-TP(C1)
(Annandale) - Reformatory Rd. bridge to Raritan River, South Branch	FW2-TM
BEDEN BROOK (Montgomery) - Entire length	FW2-NT
BIG BEAR BROOK (West Windsor) - Entire length	FW2-NT
BIG BROOK (Vanderberg) - Entire length	FW2-NT
BLACK BROOK (Polktown) - Entire length	FW2-TP(C1)
BLACK RIVER - See LAMINGTON RIVER	
BLACKBERRY CREEK (Oceanport) - Source to a line beginning on the easternmost extent of Gooseneck Point and bearing approximately 162 degrees True North to its terminus on the westernmost extent of an unnamed point of land in the vicinity of the western extent of Cayuga Ave. in Oceanport	SE1
(Oceanport) - Creek below the line described above	SE1
BLUE BROOK (Mountainside) - Entire length	FW2-NT
☆ BOULDER HILL BROOK (Tewksbury) - Entire length	FW2-TP(C1)
☆ BOUND BROOK (Dunellen) - Entire length	FW2-NT
BRANCHPORT CREEK (Long Branch) - Source to a line beginning on the northernmost extent of an unnamed point of land lying north of Pocano Ave. in Oceanport and bearing approximately 055 degrees True North to its terminus on the westernmost extent of the northern bulkhead at the lagoon located between France Rd. and Lori Rd. in Monmouth Beach	FW2-NT/SE1
(Monmouth Beach) - Creek below line described above	SE1(C1)
BUDD LAKE (Mt. Olive)	FW2-NT(C1)
BURNETT BROOK (Ralston) - Entire length	FW2-TP(C1)
CAPOOLONG CREEK (Sydney) - Entire length	FW2-TP(C1)
CEDAR BROOK (Spotswood) - Entire length	FW2-NT
CHAMBERS BROOK (Whitehouse) - Entire length	FW2-NT
CHEESEQUAKE STATE PARK WATERS (S. Amboy) - Fresh waters within the park upstream of the limits of tidal influence	FW2-NT(C1)

once-through basis for the duration of the test, in accordance with I.J.A.C. 7:18.

"Fresh water(s)" means all nontidal and tidal waters generally having a salinity, due to natural sources, of less than or equal to 3.5 parts per thousand at mean high tide.

"FW" means the general surface water classification applied to fresh waters.

"FW1" means those fresh waters that originate in and are wholly within Federal or State parks, forests, fish and wildlife lands, and other special holdings, that are to be maintained in their natural state of quality (set aside for posterity) and not subjected to any man-made wastewater discharges, as designated in Index A incorporated into this subchapter.

☆ "FW2" means the general surface water classification applied to those fresh waters that are not designated as FW1 or Pinelands Waters.

"Heat dissipation area" means a mixing zone, as may be designated by the Department, into which thermal effluents may be discharged for the purpose of mixing, dispersing, or dissipating such effluents without creating nuisances, hazardous conditions, or violating the provisions of this subchapter.

"Hypolimnion" means the lower region of a stratified waterbody that extends from the thermocline to the bottom of the waterbody, and is isolated from circulation with the upper waters, thereby receiving little or no oxygen from the atmosphere.

"Important species" means species that are commercially valuable (e.g., within the top ten species landed, by dollar value); recreationally valuable; threatened or endangered; critical to the organization and/or maintenance of the ecosystem; or other species necessary in the food web for the well-being of the species identified in this definition.

"Industrial water supply" means water used for processing or cooling.

"Intermittent stream" means a stream with a MA7CD10 flow of less than one-tenth (0.1) cubic foot per second.

"Lake, pond, or reservoir" means any impoundment, whether naturally occurring or created in whole or in part by the building of structures for the retention of surface water, excluding sedimentation control and stormwater retention/detention basins.

"LC50" means the median lethal concentration of a toxic substance, expressed as a statistical estimate of the concentration that kills 50 percent of the test organisms under



specified test conditions, based on the results of an acute bioassay.

"Limiting nutrient" means a nutrient whose absence or scarcity exerts a restraining influence upon an aquatic biological population.

"MA7CD10" means the minimum average 7 consecutive day flow with a statistical recurrence interval of 10 years.

"Measurable changes" means changes measured or determined by a biological, chemical, physical analytical method, conducted in accordance with USEPA approved methods as identified in 40 C.F.R. 136 or other analytical methods (for example, mathematical models, ecological indices, etc.) approved by the Department, that might adversely impact a water use (including, but not limited to aesthetics).

"Mixing zones" means localized areas of surface waters, as may be designated by the Department, into which wastewater effluents may be discharged for the purpose of mixing, dispersing, or dissipating such effluents without creating nuisances or hazardous conditions, or violating the provisions of this subchapter.

"Natural flow" means the water flow that would exist in a waterway without the addition of flow of artificial origin.

"Natural water quality" means the water quality that would exist in a waterway or a waterbody without the addition of water or waterborne substances from artificial origin.

"NJPDDES" means New Jersey Pollutant Discharge Elimination System.

"NOEC" means the "no observable effect concentration", which is the highest concentration of a toxic substance that has no adverse effect(s) on survival, growth, or reproduction of species based upon the results of chronic toxicity testing.

"Nondegradation waters" means those waters set aside for posterity because of their clarity, color, scenic setting, other characteristic of aesthetic value, unique ecological significance, exceptional recreational significance, or exceptional water supply significance. These waters include all waters designated as FW1 in this subchapter.

"Nonpersistent" means degrading relatively quickly, generally having a half-life of less than 96 hours.

☆ "Nontrout waters" means fresh waters that have not been designated in this subchapter as trout production or trout maintenance. These waters are generally not suitable for trout because of their physical, chemical, or biological

characteristics, but are suitable for a wide variety of other fish species.

"NPDES" means National Pollutant Discharge Elimination System.

☆ "NT" means nontrout waters.

"Nutrient" means a chemical element or compound, such as nitrogen or phosphorus, which is essential to and promotes the growth and development of organisms.

"Outstanding National Resource Waters" means high quality waters that constitute an outstanding national resource (for example, waters of National/State Parks and Wildlife Refuges and waters of exceptional recreational or ecological significance) as designated in Index G incorporated into this subchapter.

"Persistent" means relatively resistant to degradation, generally having a half life of over 96 hours.

"Pinelands waters" means all waters within the boundaries of the Pineland Area, except those waters designated as FWI in this subchapter, as established in the Pinelands Protection Act N.J.S.A. 13:18A-1 et seq. and shown on Plate 1 of the "Comprehensive Management Plan" adopted by the New Jersey Pinelands Commission in November 1980.

"PL" means the general surface water classification applied to Pinelands Waters.

"Primary contact recreation" means recreational activities that involve significant ingestion risks and includes, but is not limited to, wading, swimming, diving, surfing, and water skiing.

"Public hearing" means a legislative type hearing before a representative or representatives of the Department providing the opportunity for public comment, but does not include cross-examination.

"River mile" means the distance, measured in statute miles, between two locations on a stream, with the first location designated as mile zero. Mile zero for the Delaware River is located at the intersection of the centerline of the navigation channel and a line between the Cape May Light, New Jersey, and the tip of Cape Henlopen, Delaware.

"Saline waters" means waters having salinities generally greater than 3.5 parts per thousand at mean high tide.

"SC" means the general surface water classification applied to coastal saline waters.

"SE" means the general surface water classification applied to saline waters of estuaries.



(c) In all FW2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;
2. Primary and secondary contact recreation;
3. Industrial and agricultural water supply;
4. Public potable water supply after such treatment as required by law or regulation; and
5. Any other reasonable uses.

(d) In all SE1 waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;
2. Maintenance, migration and propagation of the natural and established biota;
3. Primary and secondary contact recreation; and
4. Any other reasonable uses.

(e) In all SE2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;
2. Migration of diadromous fish;
3. Maintenance of wildlife;
4. Secondary contact recreation; and
5. Any other reasonable uses.

(f) In all SE3 waters the designated uses are:

1. Secondary contact recreation;
2. Maintenance and migration of fish populations;
3. Migration of diadromous fish;
4. Maintenance of wildlife; and
5. Any other reasonable uses.

(g) In all SC waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;

(Expressed as maximum concentrations unless otherwise noted)

Name	Criteria	Classifications
v. Benzidine	(1) 0.1	All Classifications
vi. Cadmium, Total	(1) 10	FW2
vii. Chlordane	(1) 0.0043	FW2
	(2) 0.0040	All SE, SC
viii. Chlorine, Total Residual [TRC]	(1) 3.0	FW2
	(2) 10.0	All SE, SC
ix. Chromium, Total	(1) 50	FW2
x. DDT and Metabolites	(1) 0.0010	All Classifications
xi. Endosulfan	(1) 0.056	FW2
	(2) 0.0087	All SE, SC
xii. Endrin	(1) 0.0023	All Classifications
xiii. Heptachlor	(1) 0.0038	FW2
	(2) 0.0036	All SE, SC
xiv. Lead, Total	(1) 50	FW2
xv. Lindane	(1) 0.080	FW2
	(2) 0.004	All SE, SC
xvi. Mercury, Total	(1) 2	FW2
xvii. Polychlorinated biphenyls [PCB's]	(1) 0.014	FW2
	(2) 0.030	All SE, SC
xviii. Selenium, Total	(1) 10	FW2
★ xix. Silver, Total	(1) 50	FW2
xx. Toxaphene	(1) 0.013	FW2
	(2) 0.005	All SE, SC

REFERENCE 55

Werbin

Trube

STATE OF NEW JERSEY  
STATE WATER POLICY  
COMMISSION



SPECIAL REPORT 8

THE GROUND-WATER SUPPLIES OF  
MIDDLESEX COUNTY, NEW JERSEY

Prepared in cooperation with the United States Department  
of the Interior, Geological Survey

1943

STATE OF NEW JERSEY  
STATE WATER POLICY COMMISSION  
HOWARD T. CRITCHLOW, ENGINEER IN CHARGE

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# The Ground-Water Supplies of Middlesex County New Jersey

With Special Reference to the Part of the Coastal Plain  
Northeast of Jamesburg

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*By*

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*Prepared in cooperation with the  
United States Department of the Interior,  
Geological Survey*

## ABSTRACT

Ground-water investigations have been carried on in parts of Middlesex County since 1923. This report is based upon detailed observations of ground-water conditions in that part of the coastal plain between Jamesburg and Perth Amboy, and upon a generalized survey of ground-water conditions in the remainder of the county. It deals primarily with the factors affecting the safe yield of the more important aquifers in the county.

Roughly the northwestern third of the county is underlain by rocks of the Newark group of Triassic age and the southeastern two-thirds by sands and clays of the coastal plain, which are of Cretaceous age and are largely unconsolidated. The rocks of the Newark group dip toward the northwest, but they are so badly fractured that the dip is of very little significance from a hydrologic standpoint. Intruded into the rocks of the Newark group is a diabase dike, that is of no importance as a water-bearing formation, but stood as a ridge on the surface upon which the Cretaceous deposits were laid down. Hence the lowest of the Cretaceous sands (the Farrington sand member of the Raritan formation) is almost divided into two parts by it. To a considerable extent this ridge has been effective in retarding the advance of salt water into this sand from the estuary of the Raritan River. The beds of the coastal plain formations dip to the southeast, and alternating layers of permeable sands and relatively impermeable clays provide a setting under which water supplies are frequently encountered under artesian conditions. Both the Cretaceous formations and the older rocks of the Newark group are overlain throughout much of the county by various Quaternary deposits. These latter deposits are relatively unimportant as water-bearing formations. Their principal importance lies in their ability to absorb water and transmit it to the underlying materials, or in a few places to prevent the absorption of water by the underlying bed.

Early developments of ground water in the county were primarily in the form of relatively shallow dug wells, and in the improvement of existing springs. Drilled wells similar to those generally in use today were not developed to any considerable extent until the end of the last century. The development of large supplies of ground water has depended to a considerable extent upon the development of well drilling methods and upon the improvement of well pumping machinery. In 1941 more than 37 million gallons of water a day was pumped from wells for industrial and municipal water supplies in Middlesex County. Of this amount about 22 million gallons a day was used exclusively for industrial purposes and the remainder for public water supplies.

The quality of water obtained from wells in Middlesex County is generally satisfactory for all ordinary purposes. It sometimes requires treatment for the removal of iron or for the reduction of hardness. In some areas the ground waters have been contaminated by sea water that has been drawn into the aquifers by heavy pumping. Where this contamination has been severe, the waters are of little value except for cooling.



In the course of these investigations records of water levels have been obtained in a great many wells. Some of these records now cover a period of more than twenty years. Included in this group are some wells not affected by pumping that have been used as a standard for comparison with the fluctuations in the other observation wells. They have also proved valuable as indices of the amount of water naturally stored in the ground at various times. As such they are useful outside the scope of this report for the prediction of minimum stream flow and for similar purposes. At the Perth Amboy Water Works, at Runyon, a record of precipitation, temperature and evaporation has been obtained for approximately 20 years.

Of the various aquifers within the county three are of major importance. The rocks of the Newark group are the principal source of ground water in the northwestern part of the county. The Old Bridge and Farrington sands, both members of the Raritan formation, are the principal sources of water supply in the southeastern two-thirds of the county. The other aquifers are of relatively little importance either because of the limited area in which they are available or because they are not capable of yielding substantial supplies.

The Old Bridge sand is the most important aquifer within the county. It supplies more than half the total water used for industrial and public water supplies. In 1941 a total of more than 19 million gallons a day was withdrawn from this sand in Middlesex County and 2 or 3 million gallons a day was taken from wells tapping this sand outside the county, bringing the total yield to 21 or 22 million gallons daily. In 1942 the total pumpage had increased to 25 or 26 million gallons daily. Studies made of this sand indicate that natural recharge probably could not supply this large yield of water. Fortunately, however, at least two major developments include works for artificially recharging this sand. Even so, it is believed that the safe yield of this sand has been reached. The pumpage from this sand should not be increased except in instances where it is possible and desirable to recharge the sand with surface water in an amount essentially equivalent to the additional water to be taken from wells.

The Farrington sand yielded about 8.5 million gallons daily to municipal and industrial wells during 1941. The safe yield of this sand appears to have been exceeded for a considerable period in the past. Its capacity is limited not by the amount of natural recharge or by its ability to transmit water, but rather by the fact that it is exposed in numerous localities to the intrusion of salt water from surface sources. A considerable part of this sand now contains water that is contaminated by salt water. In at least three areas the water in this sand is severely contaminated. There is substantial evidence supporting the belief that the areas of contamination will expand with continued pumping from the wells tapping this sand. A few wells that drew from this sand have already been abandoned because of salt-water contamination, and it seems probable that a considerable number of others will have to be abandoned at some time in the future. After this has occurred and the total pumpage from the sand has thereby been reduced materially, it may be possible to develop some new water supplies from this sand in areas near its intake area and remote from bodies of surface water containing salt.

The rocks of the Newark group yield water to a large number of wells in the county. In localities where they are covered by permeable material they yield substantial quantities. In areas where they are not covered by such deposits

or where they are covered by impermeable materials, the yield is very low. The water that these rocks yield comes almost entirely from cracks which form a small part of their total volume so that their storage capacity is low. Substantial yields are safely obtained only in areas where the overlying material is capable of absorbing and storing considerable amounts of water and of transmitting it freely to the underlying rock.

It seems probable that no more large ground-water developments can be made within Middlesex County. Possibly some additional water may be obtained from the Newark group, but this should not be attempted without a careful study of conditions in the vicinity of any proposed development, because draft on these rocks is already heavy. Some additional water can be developed from the Englishtown sand in the southeastern corner of the county, but care should be exercised not to injure water supplies derived from this sand down the dip in Monmouth County. On the whole it seems probable that any large additional supplies of water for Middlesex County will have to come from surface water, and very possibly from sources outside the county. The appraisal of sources of surface water is, however, outside the scope of this report.

Future studies of the Old Bridge sand should be directed primarily toward ways of increasing its intake capacity by artificial recharge. Those of the Farrington sand should be concerned primarily with the salt-water intrusion in this sand. Intensive quantitative studies should be made of the Newark group in order to estimate more accurately its safe yield in different localities. Measurements should be continued at the evaporation station at Runyon and in the Morrell and other water-table wells. A few additional observation wells should be established in parts of the county where there is no effect of pumping.

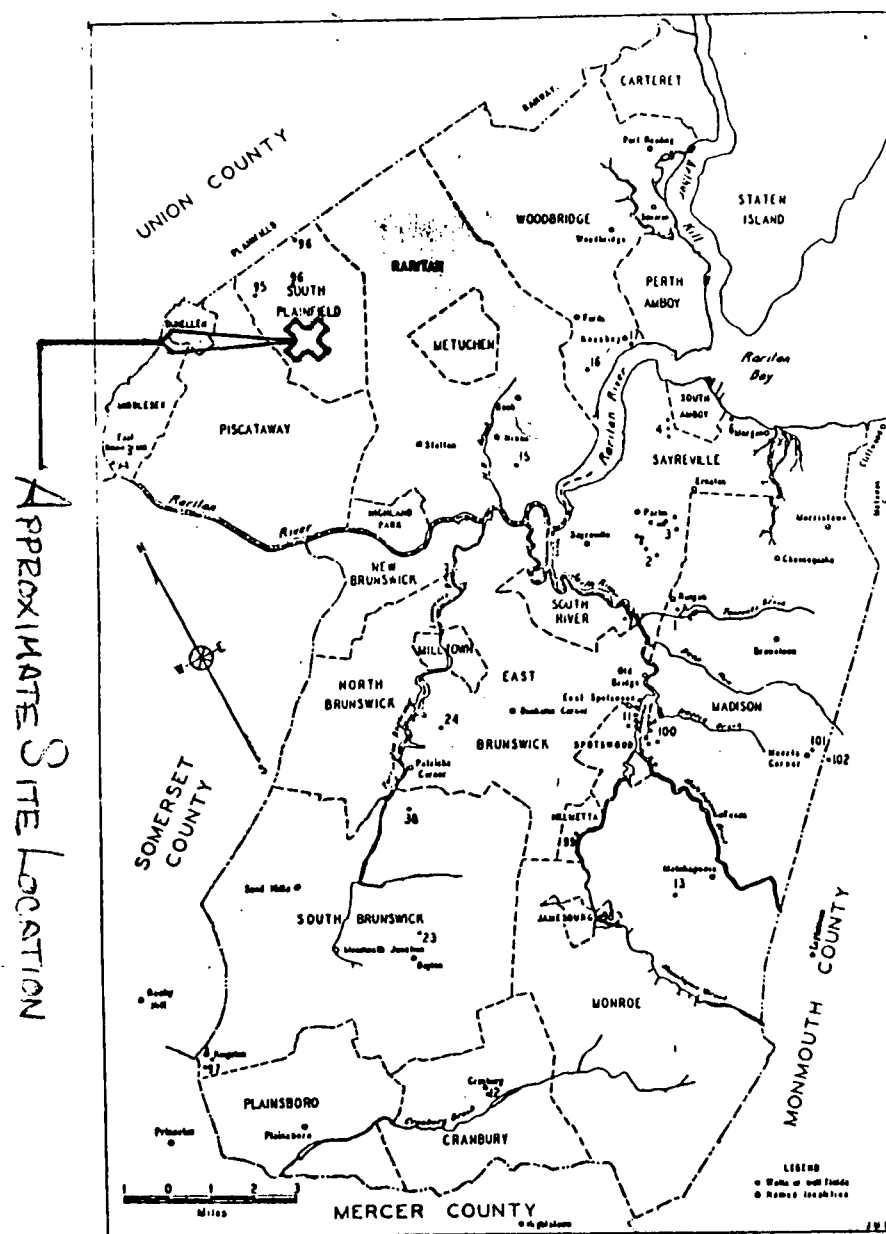


FIGURE 2.—Map of Middlesex County, showing municipal boundaries, the location of important wells or well fields, and places referred to in the text.

#### KEY TO WELL NUMBERS (Figure 2)

- |                                  |                                     |
|----------------------------------|-------------------------------------|
| 1. Perth Amboy Water Department  | 94. Elizabethtown Water Company,    |
| 2. Hercules Powder Company       | Piscataway well field               |
| 3. E. I. duPont de Nemours & Co. | 95. Plainfield-Union Water Company, |
| 4. National Lead Company         | Clinton Avenue wells                |
| 5. South Amboy Water Department  | 96. Middlesex Water Company well    |
| 6. South River Water Department  | fields                              |
| 7. Peter J. Schweitzer Company   | 97. Kingston Water Company          |
| 11. Cranbury Water Company       | 98. Jamesburg Water Company         |
| 12. State Home for Boys          | 99. Helmetta Water Company          |
| 21. Kufka test well              | 100. Duhrnal water supply           |
| 24. Fischer test well            | 101. Morrell well                   |
| 38. Hecker test well             | 102. Hulsart well                   |

*Scope of report.*—This report is based upon detailed observations of ground-water conditions which were begun at the Perth Amboy Water Works at Runyon in 1923, and have been gradually expanded to cover much of the industrial area along the estuary of the Raritan River, and upon a more generalized survey of ground-water conditions in the remainder of the county which has been carried out mainly during 1941 and 1942. Detailed field studies have been made of the geology and hydrology of the part of the county that lies in the coastal plain northeast of Jamesburg. It is in this area that most of the ground-water development in the county has taken place, and the major part of the report deals with the conditions there. For the remainder of the county, the report is more generalized.

The quality of the ground water of the area is discussed briefly in a section of the report devoted to that topic. Samples of water have been collected from representative wells tapping each of the more important aquifers and have been analyzed for their mineral content in the Water Resources Laboratory of the Geological Survey. The results of these analyses are included in tabular form. No attempt is made to determine the sanitary or bacteriological quality of the water as these features are usually not due to conditions inherent in the aquifer but to extraneous causes or to the treatment of the water after it has been pumped to the surface.

During the investigation on which this report is based much information on water levels and artesian pressure was collected. Many thousands of individual measurements of water level or artesian pressure were made and continuous records of water levels were obtained by means of automatic water-stage recorders at one time or another in about thirty wells. Most of these records have been published by the Geological Survey in its annual reports on water levels and artesian pressure.<sup>1</sup> The remaining records will be published in forthcoming

<sup>1</sup> Meinzer, O. E., Wenzel, L. K., and others, Water levels and artesian pressure in observation wells in the United States: U. S. Geol. Survey Water-Supply Papers 777, 817, 840, 845, 880, 906, 936, etc. (Annual volumes since 1935.)

volumes of the same series. For this reason, water-level records are presented in this report mainly in graphical form and only when they serve to clarify the points under consideration.

## HISTORY OF GROUND-WATER DEVELOPMENT

### Public Water Supplies

The first ground-water supplies to be developed in Middlesex County were undoubtedly obtained from springs and shallow dug wells for domestic use. In fact it is probable that this was the principal form of ground-water development for about 200 years after the settlement of the county by the white men in 1666. The first form of public water supply was probably the town or public well. For example, funds were appropriated for the digging of public wells in Perth Amboy in 1774. Some of these wells were reported to be still in existence in 1856.<sup>2</sup> It is very likely that similar public wells furnished a part of the supply for other towns, although some may have depended entirely upon surface water or springs.

The water supply of Perth Amboy appears to have been drawn from dug wells or springs within the city until about 1881, when a water company was organized to supply surface water from a small stream within the present city limits. In 1890 the city purchased this supply and in 1891 it established its Runyon pumping station to deliver surface water from Tennent Brook. In 1897 the first wells at this station were drilled to the Farrington sand which then contained water under artesian head, so that it was not necessary to pump the water from the wells. As the demand increased additional wells were drilled, but the increased draft resulted in a lower head and it finally became necessary to pump from the wells. The high iron content of the water from the Farrington sand caused some complaint, and when pumping became necessary it was decided to seek a supply from the shallow non-artesian sands in the vicinity of the pumping station in the hope of improving the quality of the supply. In 1902 the first wells drawing from the Old Bridge sand were drilled and this sand has since become the principal source of water supply for the City of Perth Amboy.

The early settlers at New Brunswick also appear to have obtained some of their water supply from springs and shallow dug wells, although it is probable that some of it came from the Raritan River, which was then relatively pure and, due to the wooded nature of its watershed, probably carried much less sediment than at present. In 1801 a com-

pany was organized in New Brunswick to supply spring water to a part of the city through a system of wooden pipes.<sup>3</sup> This venture was abandoned after a relatively short time, and thereafter the town's water supply was obtained mainly from wells within the city until a supply of surface water was developed from Lawrence Brook in 1867. In 1911 an average of 6.6 million gallons daily was drawn from Lawrence Brook to supply New Brunswick, Highland Park and some adjacent territory.

The history of the water supplies of the other municipalities in the county is similar to that of Perth Amboy and New Brunswick. The demand for public water supplies other than the town well and its pump has sprung up very largely within the last half a century. Prior to that time most of the population of the county was rural and the small urban centers derived their water supplies principally from springs and shallow dug wells. Much of the northern part of the county is now supplied by the Middlesex Water Company, which began operations about 1897. Small parts of this area are also served by the Plainfield-Union Water Company, which began delivering water about 1890 and by the Elizabethtown Water Company, which operates a supply established in the northwestern part of the county about 1897. The urban areas south of the Raritan River are more widely scattered than those north of the river and are served by local water companies or by municipal water supplies, some of which have been developed since 1900, and most of which use ground water.

The development of large ground-water supplies in Middlesex County as elsewhere, has coincided with, and to a large extent has depended upon the development of efficient machinery for pumping water from deep wells and of improved methods of drilling wells. The earliest installations depended upon pumping from the wells by direct suction or by means of deep-well reciprocating pumps. The introduction of the air lift about the beginning of the present century provided an impetus to the development of ground-water supplies and many plants still use this method of pumping. The perfecting of the deep-well centrifugal or turbine pump made possible still more efficient pumping from wells. The methods of well drilling have also been greatly improved, and wells yielding one or two million gallons of water a day from some of the better aquifers are no longer exceptional.

<sup>3</sup> Wall, John P., *Chronicles of New Brunswick*, 1931.

<sup>2</sup> Whitehead, Wm. A., *History of Perth Amboy*, 1856.

### Industrial Water Supplies

Industrial water supplies from wells now account for the major part of the ground water used within the county, exceeding even the total quantity withdrawn for public supplies. This heavy development has occurred very largely within the last 25 or 30 years and almost entirely within the last 50 years. Like other ground-water developments, it has coincided with the development of efficient machinery for pumping water from deep wells. The most rapid increase, however, in the industrial use of ground water in Middlesex County began about 1914 when the demand for water for war-time industries was felt. New and improved manufacturing processes and products are constantly being developed and the demand for industrial water has increased greatly. The ease with which apparently substantial supplies of ground water can be developed in favorable localities has encouraged the construction of numerous industrial wells.

The largest industrial water supply in the county is the so-called "Duhernal" development, which is operated jointly by the E. I. du Pont de Nemours & Company, the Hercules Powder Company, and the National Lead Company to assure a satisfactory and permanent water supply for their factories in the Borough of Sayreville. The name "Duhernal" is also used in this report in a broader sense to refer to the combined water supplies of the three companies, which together constitute one of the dozen or so largest water supplies in the State. The Duhernal water supply is not a utility organized for the sale of water but rather an outstanding example of cooperation toward a common end by companies that are to a considerable extent competitive in other matters.

The history of the Duhernal water supply and that of the other water supplies of the three companies is naturally an important part of the record of water-supply development in the county. It shows how industrial over-development may occur in the absence of detailed knowledge of ground-water conditions. It also furnishes an excellent example of the way intelligent conservation measures may be applied by industrial cooperation when the nature of the ground-water conditions affecting their water supplies is understood.

In 1904 the du Pont factory was established at Parlin. At about the same time some wells were drilled to supply a part of the water used in the plant, although some water was obtained from other sources. The activities at this plant were greatly increased during the first World War, beginning in 1914, and most of the water was then taken from

wells. No record is available of the amount of water consumed at that time, but it is probable that an average of no more than 1 or 2 million gallons daily was used. This water was taken from the Farrington sand.

Several years after the war the Hercules Powder Company sought a suitable location for a new plant. Transportation facilities and other factors were, of course, considered, but it is understood that the final decision to locate the plant in Sayreville was based to a considerable extent upon the belief that a large supply of excellent water was available and could be obtained at relatively little expense by the construction of a suitable number of wells. This belief must have been based mainly upon the capacity of wells in that area to yield water rather than upon any serious consideration of the safe yield of the aquifer. It resulted in almost doubling the draft upon the Farrington sand in the Borough of Sayreville in a very short time. Even so it probably would not have resulted in exceeding the safe yield of the sand except for the unrecognized danger of salt-water contamination and the subsequent dredging operations, especially in the Washington Canal, which accentuated it.

The National Lead Company's plant was established in 1935. The studies of the Farrington sand up to that time seemed to indicate that its safe yield would not be exceeded by the additional draft that this plant would require. Even at that time the danger of salt-water intrusion had not been recognized and it was believed that the additional draft would probably do no material harm since the wells would be at some distance from other centers of pumping and the interference with existing wells would not be very great.

During 1935 the draft upon the Farrington sand at the du Pont and Hercules factories was increased somewhat above the previous draft. The pumpage at the three plants and at the Perth Amboy Water Works caused the water levels to be drawn down to such an extent that some concern was felt about the permanency of the supply. As a result an intensive study of the conditions affecting this sand in this area was undertaken and a report was issued on the subject in 1937.<sup>4</sup> Data collected in connection with this study indicated that there might be danger of salt-water intrusion from the vicinity of the Washington Canal and this fact was pointed out in the report. Subsequent investigation showed that the salt-water intrusion from this direction was well advanced, and indicated that there was imminent danger of the destruction of some of the water supplies unless the rate of pumping could be reduced substantially.

<sup>4</sup> Barksdale, Henry C. Op. Cit. Special Report 7.

adjacent counties. Effective control should therefore be State-wide and the regulation of inter-state aquifers may require inter-state cooperation. Effective control should also be broadly inclusive. Restrictions applied to one class of water users and not to another would be futile as well as unfair. No diversion of ground water should be made without the prior approval of some unbiased agency empowered to safeguard this valuable natural resource against injurious overdevelopment.

## OUTLINE OF GEOLOGY

### Physical Divisions

Middlesex County lies within two major physiographic provinces, the Coastal Plain Province and the Piedmont Province. This division is based largely on rocks and structure projected from nearby regions, for in Middlesex County the topography would not warrant this subdivision, mainly because it has been modified by Quaternary deposits. The part of the county which is in the Coastal Plain Province is, roughly, that which lies southeast of a line from Plainsboro to Carteret. In this area the bed rock consists of unconsolidated or poorly consolidated sands and clays of Cretaceous age (see Stratigraphic Table, page 18, for geologic time-table) which dip at low angles to the southeast.

The Piedmont Province includes the area to the north and west of the Coastal Plain Province. It is underlain by relatively hard Triassic rocks, which in most regions stand up as rounded hills above the flat coastal plain. The prominences at Sand Hills are capped by outliers of the formerly more extensive Cretaceous sediments which have been protected from erosion by the numerous consolidated layers of "iron-stone" (ferruginous sandstone) and the resistant Triassic diabase to the south. Farther north and east the Triassic shales have been eroded nearly as low as the Cretaceous sediments. This feature, together with the blanket of Quaternary deposits, has left little difference in the topography of the two provinces.

### Geologic History

The geologic history of Middlesex County as observed from the rocks within its borders is necessarily far from complete. Much of it, however, can be read from rocks in nearby areas although other events are forever lost. References to the length of time which has elapsed since the deposition of some of the formations are of necessity approxi-

mate. They are based on age determinations from radio-active minerals and are given to indicate the slowness with which geologic processes operate, the vastness of the intervals in which there are no geological records within the county and, to some extent, the relative age of the existing formations.

The gneiss of the Wissahickon formation, known only from well logs in Middlesex County, gives us the first chapter in the geologic history of the county. In pre-Paleozoic time, at least 600 million years ago, muddy sediments were deposited, which later were folded and metamorphosed (altered) and then intruded by highly heated molten rock. The igneous activity further metamorphosed and recrystallized the sediments so that they little resembled the original deposits.

A long period of erosion followed, during which the existing mountains and hills were reduced to a fairly level plain. This was followed by the development of a depression which extended from the Gulf of Mexico northeastward through the Appalachian belt and Canada, a depression which was occupied by an arm of the sea for many millions of years. The record of those years is read in the sediments which were deposited in the depression and in which we find today the fossils, or preserved remains of animals which lived and developed during that period (Paleozoic era). Since these sediments are today found only northward of Middlesex County, the presumption is that either this area was above sea-level during that entire period, or that such sediments as were deposited have since been entirely removed by erosion. Whichever assumption is right, the second oldest rocks which we find in Middlesex County today are the generally red-colored rocks of Triassic age, which are believed to be at least 400 million years younger than the Wissahickon formation.

The Triassic sediments in Middlesex County are believed to have been deposited in an intermontane valley in the latter part of the Paleozoic geologic period. During this same time there was considerable igneous activity, the most important of which was the intrusion of the thick sheet of diabase known along the Hudson River as the Palisades. This sheet is continuous in the Triassic rocks in Middlesex County from Carteret to Rocky Hill, but is found at the surface only from Deans to Rocky Hill. The Triassic rocks were later tilted, faulted and eroded during an interval of about 100 million years. This interval spanned all of the Jurassic period and more than half of the Cretaceous period.

In early Upper Cretaceous times the land surface in Middlesex County consisted of a plain of moderate relief sloping to the south at about 60 feet to the mile. The bed rock in the southern third of

area consisted of the Wissahickon formation and the rest consisted of Triassic rocks, above which the resistant diabase sill stood as a ridge. Then the land was submerged and Upper Cretaceous sands and clays were deposited on it in alternating layers dipping to the southeast. These sediments tended to thicken oceanward so that the older sediments dipped parallel to the underlying plain while the higher formations were more nearly horizontal. During this period there were fluctuations in the depth of water as indicated by the alternation of shallow and deep water fossils in the Cretaceous formations. The general relationship of the various rocks in the county is shown on the geologic section in figure 3.

In the Tertiary period which followed, there were intervals of deposition and of erosion, but any sediments which may have been deposited in Middlesex County have since been removed by erosion, together with much of the older Cretaceous deposits.

In the Quaternary period, which dates from the beginning of the Ice Age and in which we are now living—a period of some 2 million years—there were four advances of great ice sheets moving from centers in Canada into the northern part of the United States, interspaced with times of partial submergence and deposition. In Middlesex County there is evidence of only the last ice sheet. This consists of the Wisconsin drift which blankets the northern third of the county. The oldest non-glacial Quaternary deposits have been entirely removed from the county. The Pensauken formation, which is much older than the Wisconsin drift, is found capping the hills and higher divides but has been removed from the larger stream valleys. The Cape May formation, which is probably slightly older than the Wisconsin ice sheet there have been only relatively slight physiographic changes in the county.

#### Outline of the Stratigraphy

The areal geology of Middlesex County is shown on figures 4, 5 and 6 on pages 19, 20, and 21. The geologic formations shown thereon range from soft, unconsolidated alluvial deposits formed within the last few thousand years, to compacted rocks whose origin dates back many millions of years. The following stratigraphic table, arranged in normal sequence (i. e. youngest formation at the top) includes a still older formation (the Wissahickon) which has been penetrated by a number of deep wells within the county. Detailed descriptions of the formations are given in the section on hydrology and geology of the rock formations beginning on page 52.

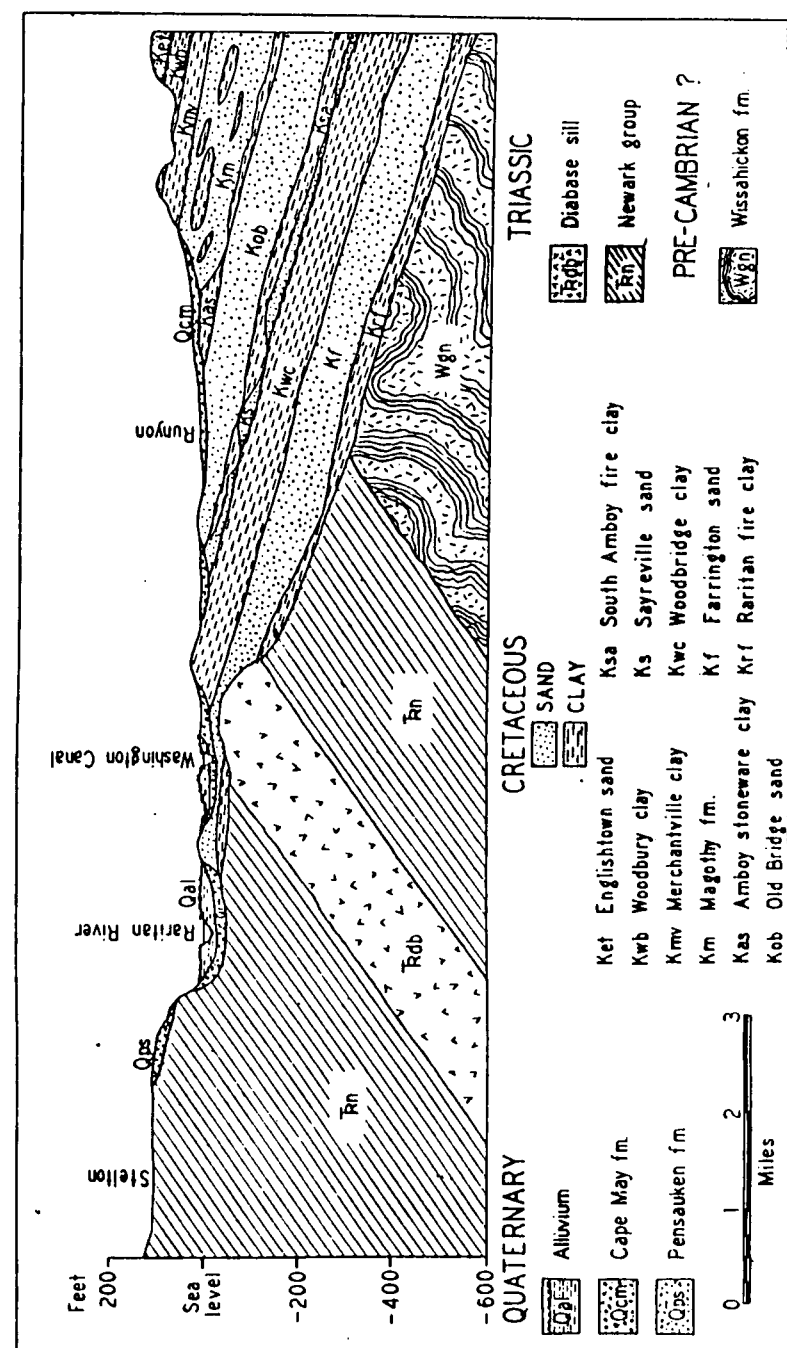


FIGURE 3.—Generalized geologic section from Stelton through Runyon to the county line.

## STRATIGRAPHIC TABLE FOR MIDDLESEX COUNTY, N. J.

## Cenozoic sequence

## Quaternary system

## Recent series

Alluvium

Eolian deposits

## Pleistocene series

Wisconsin drift

Cape May formation

Pensauken formation

## UNCONFORMITY

## Mesozoic sequence.

## Cretaceous system

## Upper Cretaceous series

Mount Laurel and Wenonah sands

Marshalltown formation

Englishtown sand

Woodbury clay

Merchantville clay

Magothy formation

Raritan formation

Amboy stoneware clay

Old Bridge sand member

South Amboy fire-clay

Sayreville sand member

Woodbridge clay

Farrington sand member

Raritan fire-clay

## UNCONFORMITY

## Triassic system

## Upper Triassic series (Newark group)

Brunswick shale

Lockatong formation

Stockton formation

## UNCONFORMITY

## Proterozoic sequence (?)

## Pre-Cambrian (?)

Wissahickon formation

APPROXIMATE SITE LOCATION

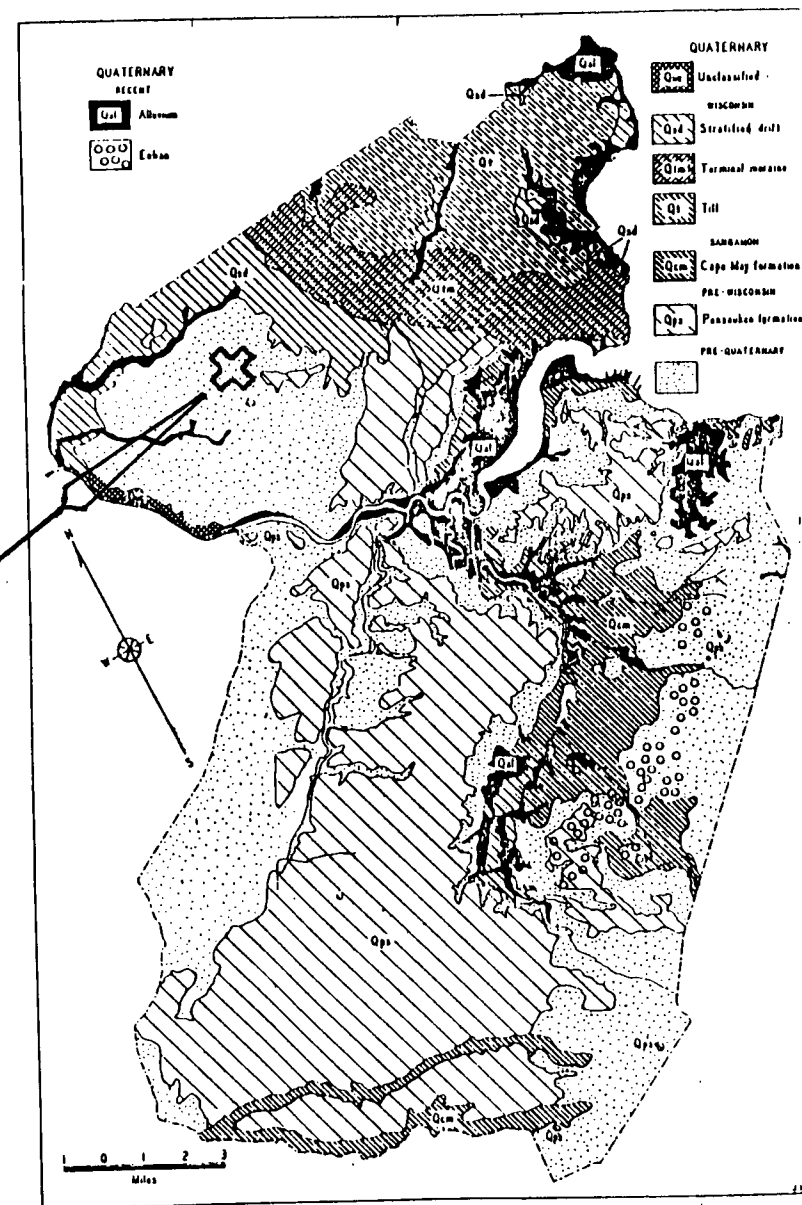


FIGURE 4.—Map of Middlesex County showing the areal distribution of the rocks of the Quaternary system. Small quantities of good water are obtained from the eolian deposits, the stratified drift, the Cape May and Pensauken formations, and the unclassified deposits.

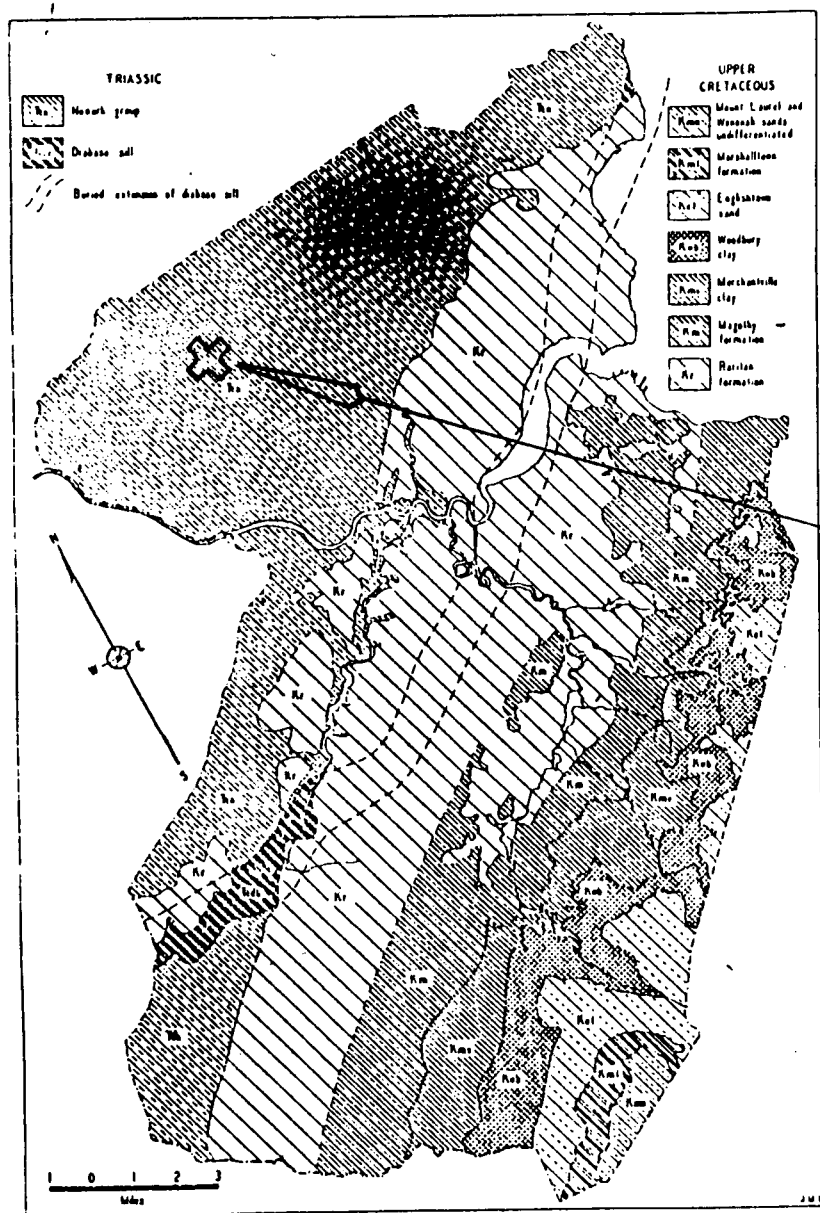


FIGURE 5.—Map of Middlesex County showing the exposures of the rocks of the Triassic and Cretaceous systems. Small quantities of good water are obtained from the Mount Laurel and Wenonah sands, the Englishtown sand and the Magothly formation within the county. Substantial quantities are derived from the Raritan formation and the rocks of the Newark group.

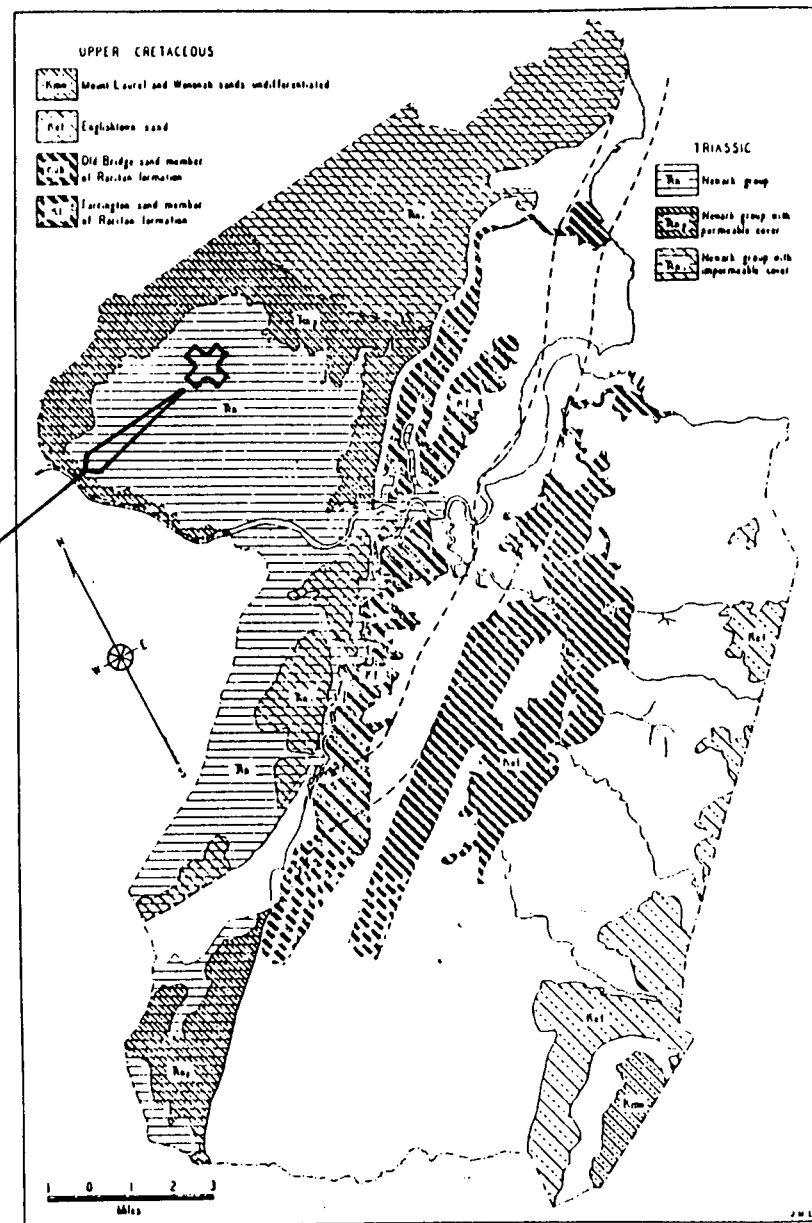


FIGURE 6.—Map of Middlesex County showing the intake areas of the important aquifers. Large quantities of good water are obtained from the Old Bridge and Farrington sand members of the Raritan formation. Small quantities are obtained from the Englishtown sand and the Mount Laurel and Wenonah sands. The rocks of the Newark group yield moderately large supplies where overlain by permeable materials, but elsewhere their yield is small.



evaporated from the pan than fell upon it. Many attempts have been made to determine the ratio between the rate of evaporation from the surface of a pond or lake and the rate of evaporation from a land pan. In the computations in this report, it is assumed that the evaporation from a pond or lake is about 70 percent of that from a land pan. In view of the fact that the application of any sizeable correction would bring the total evaporation from a water surface below the total precipitation during the growing season, and further that the evaporation during the colder months is probably much less than during the warm months, it seems probable that there would be an excess of precipitation over evaporation on a pond such as the Runyon Pond during the course of a year.

### WELL AND PUMPAGE INVENTORY

*Summary and Scope.* It is estimated that an average of more than 37 million gallons of water a day was pumped from wells in Middlesex County during 1941 for public and industrial supplies. Of this amount about 10 million gallons a day was withdrawn from wells north of the Raritan River and about 27 million gallons a day from wells south of the river. All this water was pumped from 293 wells, making an average consumption of approximately 127 thousand gallons a day from each well. Since most of the wells were not pumped continuously, their potential yield is probably much greater. Because of increased industrial activity caused by the present war, the pumpage was greater in 1941 than in 1940. It is probable that the rate of pumping from wells in the county will continue to increase with the expansion of industrial activity.

These estimates do not include approximately 500 thousand gallons of water withdrawn daily from wells for the supply of individual homes or small farms. Although there are a large number of wells of this type in the rural and suburban sections of the county, the ground-water resources of the county are not appreciably affected by them. They are widely scattered and the amount of water withdrawn from each is relatively small.

The estimates of pumpage given in this report are based on data obtained from various sources. The data for public water supplies were readily available from the quarterly reports of water consumption submitted by each public water supply system in the State, as required by law. These reports are in the files of the State Water Policy Commission. Most of the public supplies are metered and those not metered

use fairly accurate methods of determining pumpage in accordance with the requirements of the engineers of the Commission. Most of the large private supplies in the county are also metered and the owners have willingly supplied data for the purposes of this investigation. The records from these sources are, therefore, reasonably accurate. The remainder of the data was collected early in 1942. All the industries in the county, regardless of size, were contacted either by mail or by members of the technical staff engaged in this investigation. Many of the estimates obtained in this way were made from records of pump operation kept by the individual industries. Some were based on the yield of the individual wells as originally determined by the driller. Such estimates may at times be somewhat in error, but the aggregate amount of pumpage estimated in this way forms only a small percentage of the total. It is believed, therefore, that the totals are essentially correct.

No attempt was made to ascertain the total number of wells in the county. There are, however, in the files of the State Geologist and of the State Water Policy Commission, records of approximately 800 wells in the county. Of the 293 wells that yielded water for public or industrial purposes during 1941, there were approximately 103 wells for public supply from which an average of about 15 million gallons a day was obtained, and 190 industrial wells from which about 22 million gallons a day was obtained.

*Distribution of Pumpage.* The amount and source of water pumped from wells in each municipality in the county in 1941 is shown in table 2 on page 33. For easy reference and a clearer understanding these data are also shown in graphical form on figure 7. The total pumpage in each municipality in 1941 is represented on the map by circles, the areas of which are proportional to the amounts of water pumped. The circles are divided into segments to show the amount of water pumped from each major aquifer.

Pumpage in only four of the total of twenty-five municipalities in the county exceeded an average of one million gallons a day during 1941. These were Madison Township, the Borough of South Plainfield, the Borough of Sayreville and the city of South Amboy. Only one of these, the Borough of South Plainfield, is north of the Raritan River.

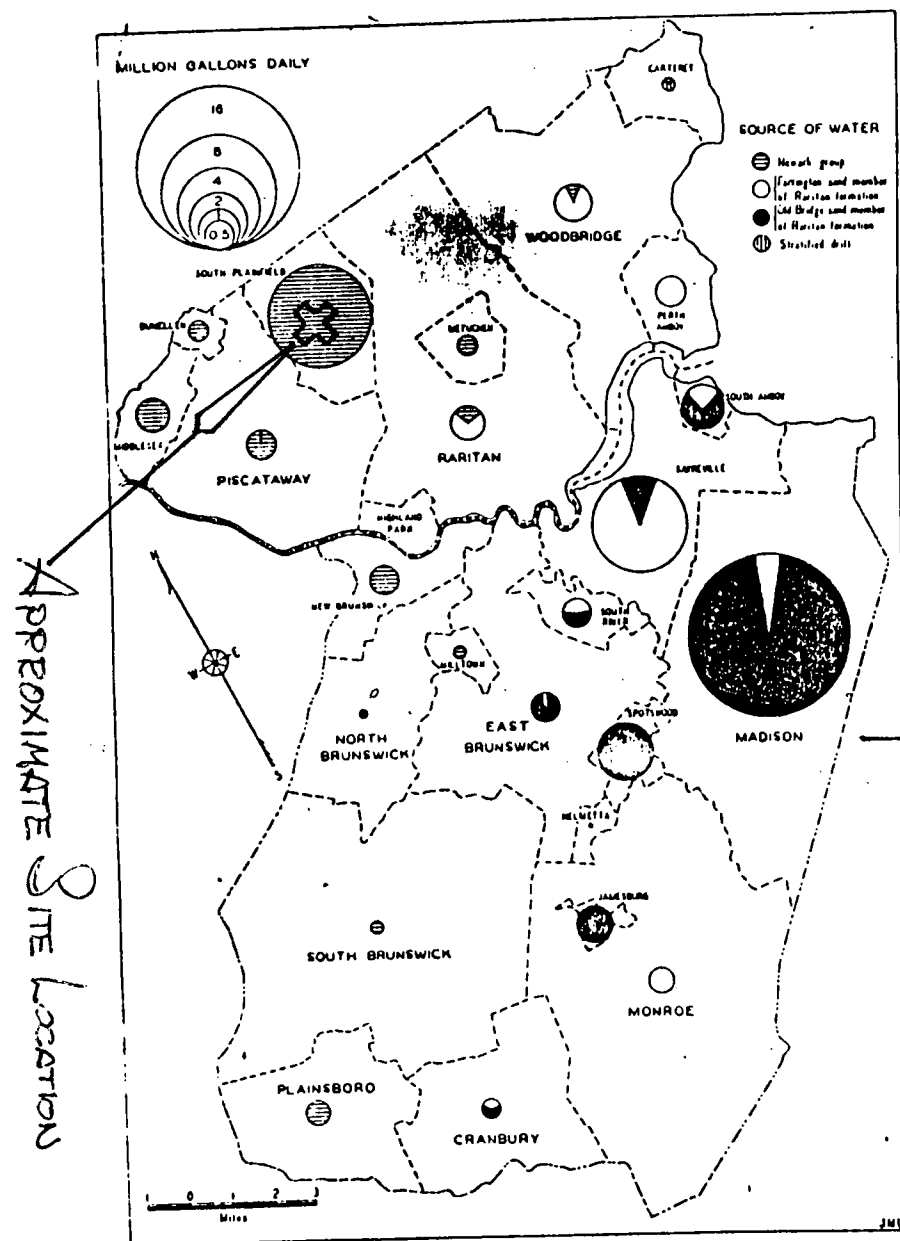


FIGURE 7.—Map of Middlesex County showing the quantity and distribution of the ground water pumped in 1941.

TABLE 2

Source and quantity of water pumped from wells for public and industrial water supplies in each political unit in Middlesex County, New Jersey, in 1941

Political Unit	Old Bridge Sand member of Raritan formation	Farrington Sand member of Raritan formation	Newark Group	Total	Number of wells pumped
—In thousands of gallons daily—					
Carteret Borough			35	137 <sup>a</sup>	7
Cranbury Township	122	73		195	3
Dunellen Borough			259	259	5
East Brunswick Twp.	412	22	8	442	4
Helmetta Borough	17			17	2
Highland Park Bor.					0
Jamesburg Borough	780			780	5
Madison Township	15,185	795		15,980	64
Metuchen Borough			221	221	5
Middlesex Borough			638	638	13
Milltown Borough			109	109	4
Monroe Township		352		352	6
City of New Brunswick			535	535	19
North Brunswick Twp.			<sup>b</sup>	<sup>b</sup>	<sup>b</sup>
City of Perth Amboy		579		579	6
Piscataway Township			539 <sup>c</sup>	539 <sup>c</sup>	17
Plainsboro Township			322	322	5
Raritan Township		504	197	701	16
Sayreville Borough	679	4,907		5,586	19
City of South Amboy	926	286		1,212	9
South Brunswick Twp.			106	106	4
South Plainfield Bor.			6,496	6,496	36
South River Borough	240	229		469	8
Spotswood Borough	670			670	7
Woodbridge Township		695	113	808	29
Totals	19,031	8,442	9,578	37,153	293

- a. Includes 102 thousand gallons a day pumped from stratified drift.  
 b. Included with City of New Brunswick.  
 c. Includes a small amount from the stratified drift.

Over 40 percent of all the ground water withdrawn in the county was from wells in Madison Township, where a total of 16 million gallons a day was withdrawn from 64 wells in 1941. The two largest ground-water developments in this county are located in this township. They are the Perth Amboy Water Department well field at Runyon and the Duhernal well field a short distance southwest of Old Bridge. The combined ground-water withdrawals of these two supplies amounted to nearly 16 million gallons a day during 1941, accounting for practically all of the water withdrawn from wells within the township. An average of 9 million gallons a day was withdrawn by the Duhernal water supply for industrial purposes from 12 wells, and an average of about 7 million gallons a day by the Perth Amboy Water Department from 51 wells.

REFERENCE 56

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REPORT  
PHASE I  
SITE GROUNDWATER PROTECTION PLAN  
FOR THE CHEVRON CHEMICAL COMPANY FACILITIES  
AT SOUTH PLAINFIELD, NEW JERSEY

JOB NO. 03818-049-10  
May 1980

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# Dames & Moore

CRANFORD, NEW JERSEY



### 3.1 REGIONAL HYDROGEOLOGY

#### 3.1.1 Regional Geology

The oldest known rock strata in the region is the Wissahickon Formation of Cambro-Ordovician age which is located generally in the southern third of Middlesex County. The Wissahickon consists of schist and gneiss of intermediate composition. It is not exposed at the surface in this area and is known only from borings and wells which have penetrated into this unit.

Approximately 200 million years ago during the Triassic Period, the Brunswick Formation of the Newark Group was deposited in a down faulted basin called the Newark Basin. These non-marine red-brown shales with interbedded siltstones and occasional layers of sandstone trend generally to the northeast and dip  $9^{\circ}$  to  $12^{\circ}$  to the northwest. Several igneous bodies in the form of basalt flows are intercalated within the Newark Group, and form the Watchung Mountains to the north of the site.

The Brunswick Formation is overlain by glacial deposits of Pleistocene age (approximately 10,000 years old). These sediments are composed of varying amounts of clays, silts, sands, and cobbles and were deposited by the last (Wisconsin) of four huge continental ice sheets. The southern limit of advance by this ice sheet is represented by a terminal moraine which is located roughly one mile east of the site and along a curved line from Plainfield to Metuchen and the mouth of the Raritan River at Perth Amboy. North of this moraine is a till plain composed of unsorted material ranging from clay to boulders, directly deposited by the ice sheet as it melted and retreated northward. Southwest of the terminal moraine is an approximately 16 square mile area of glaciofluvial sediments (stratified drift) called an outwash plain. These sediments were deposited by waters from the melting glacier and are generally composed of layers of sand and gravel interbedded with silty and clayey layers. ~~This~~

- \* ~~outwash plain directly underlies the Chevron site and is located approximately~~
- \* ~~between the towns of Metuchen, Plainfield, and East Bound Brook. Finally, these~~
- sediments are overlain occasionally by Recent Alluvium, generally present in river
- \* valleys and swamps. ~~Based on well logs obtained from the New Jersey Bureau of~~
- \* ~~Geology (Plate 1), the thickness of these sediments, and thus the depth to bedrock~~
- \* ~~(Brunswick Shale), varies from zero to about 105 feet within about 1 1/2 to 2 miles of~~
- \* ~~the Chevron site.~~

### 3.1.2 Regional Ground-Water Regime

Ground-water is present in varying amounts in all of the consolidated and unconsolidated deposits of this region. Because of its large areal extent, the Brunswick Formation is one of the most important aquifers in Middlesex County. The water is generally present in secondary openings (fractures and joints). Thus, the effective permeability varies greatly in the Brunswick Formation depending upon lithology and fracture density. Yields from wells tapping this Formation in the general area about the site range from 2 to 660 gallons per minute (gpm) with an average of 140 gpm. The specific capacities of these wells range from 0.1 to 25 gpm per foot of drawdown with an average of 3.6 gpm per foot of drawdown. The depth of wells in the Brunswick range from 60 to 1,566 feet and average 213 feet.

In most locations, the overlying glacial sediments and the bedrock (Brunswick Formation) are in hydraulic communication. Recharge to the bedrock is generally through infiltration of precipitation directly through the surficial sediments. The surficial (glacial) sediments, in general, have an inadequate thickness and cover too small an area to be an important water source alone. However, they do hold water which percolates into the underlying bedrock. Thus, the more permeable the surficial sediments, the more recharge to the Brunswick Formation. Of the three types of glacial sediments described in Section 3.1.1, the outwash type is generally the most permeable (less silt and clay) and thus provides the best recharge to bedrock. Al-

\* *This material was highlighted in the original report.*

\* though the ~~regional flow of groundwater in this area is generally to the north and west,~~ it could be affected locally by interference from nearby pumping wells.

The water-bearing characteristics of the glacial deposits and the bedrock in the area surrounding the site differ widely. Much of this difference is due to the type of openings in which the water is stored — the primary openings of the glacial deposits consisting of intergranular pore spaces at the time of deposition; or, secondary openings of the bedrock developed along joints, bedding planes, and faults subsequent to deposition and lithification.

The quantity of water that may be stored in a deposit depends on the porosity, or the percentage of the total volume of the deposit that is occupied by pores and other openings.

The rate at which water moves through deposits, and thus the readiness with which it is available for withdrawal from wells, is controlled by the permeability of the material. Permeability, which is related to the size and degree of interconnection of pore spaces and other openings, is normally very low in bedrock and till. The permeability of glacial outwash deposits is generally much higher. In faulted and fractured bedrock, localized zones of high permeability can be present.

### 3.2 HYDROGEOLOGY OF THE SOUTH PLAINFIELD, N.J., CHEVRON FACILITY

#### 3.2.1 General

In this section, we present the site specific hydrogeologic information for the South Plainfield, New Jersey, Chevron Facility. We will describe the ground-water flow regime in terms of zones of recharge, discharge and flow paths; generally evaluate the relationships between the soil and rock aquifers; as well as provide the data on flow velocities.

\* This material was highlighted in the original report.

## Site Topography

The South Plainfield, New Jersey, Chevron Facility is situated in the wide, low valley of the Bound Brook near its head waters. The average Site surface elevation is about 70 feet above mean sea level (MSL) with almost no variation. To the east and about one mile from the Site, the topography rises to an elevation of about 160 to 180 feet, representative at the terminal moraine. The topography to the west of the Site is much flatter, rising to an elevation of only about 80 to 100 feet.

The uppermost reaches of Bound Brook flow northwest and then west from a swampy area just southwest of the Chevron Site (Figure 1). Several small open, lined drainage ditches flow eventually southeast off Chevron's property and then into a small west-flowing tributary of Bound Brook downstream of the aforementioned swampy area (Figure 5).

### 3.2.3 Bedrock Geology

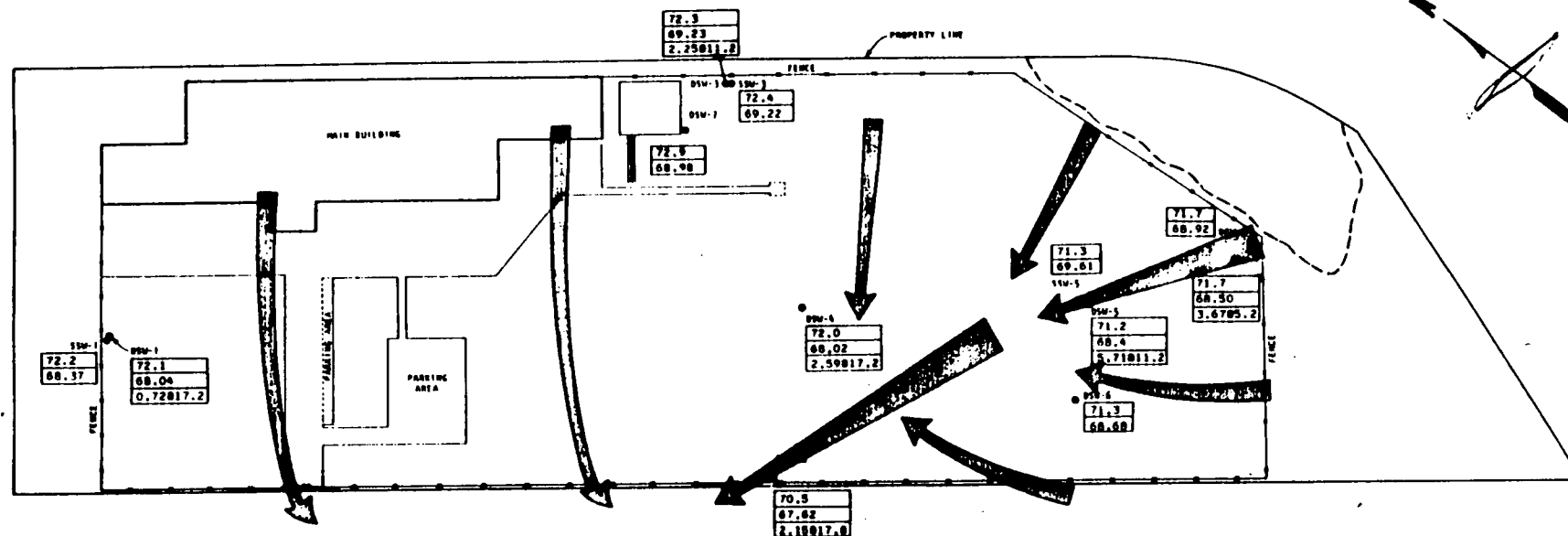
\* The entire Site is underlain by the Brunswick Formation at depths of about 47 feet on the southeastern portion of the fenced property to 55 feet below ground surface on the northwestern end of the property. The bedrock is indicated on the generalized geologic cross sections, Figures 2 and 3, and consists of a red-brown fractured shale as cored in boring/well DSW-1 (the only boring cored). Bedrock was encountered in three borings/wells across the Site: DSW-1, DSW-2, and DSW-3. Si-  
\* a unit of about 24 to 32 feet of relatively impermeable clay was encountered below  
\* the bedrock was assumed to be continuous at this time

### 3.2.4 Soil (Glacial) Geology

Based on the three exploratory bore holes that penetrated to bedrock (DSW-1, DSW-2, and DSW-3), the surficial (soil) deposits range from about 47 feet thick at Well DSW-2 to about 55 feet thick at DSW-1, and are of glaciofluvial outwash or lacustrine origin. This relationship is shown in the generalized geological cross section A-A (Figure 2). The location of this cross section and cross section B (Figure 3) are indicated on Figure 1.

10  
\* This material was highlighted in the original report.





PLOT SHOWING THE MOST PROBABLE GENERAL DIRECTION  
OF GROUND-WATER FLOW IN THE SOIL AQUIFER

CHEVRON CHEMICAL FACILITY.  
SOUTH PLAINFIELD, NEW JERSEY



KEY:

- SHALLOW MONITORING WELL IN SOIL
- DEEP MONITORING WELL IN SOIL
- DSW-2 MONITORING WELL DESIGNATION

70.5	GROUND SURFACE ELEV. (FT)
67.62	STATIC W.L. ELEV. (FT) 046-13-79
2.15017.0	DRAWDOWN (FT) & DISCHARGE (GPH)

REFERENCE 57

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REPORT  
PHASE II STUDY  
CHEVRON ORTHO FACILITY  
SOUTH PLAINFIELD, N.J.

JOB NO. 3818-062-10  
JANUARY 1982

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# Dames & Moore

CRANFORD, NEW JERSEY



TABLE 1

GROUND WATER LEVELS

Well No.	Elevation of Top of Casing (ft)	Ground Water Elevation (ft Above MSL)	
		6/16/80	3/17/81
DSW-1	72.83	66.64	67.17
SSW-1	72.93	66.65	67.76
DSW-2	73.04	67.58	68.23
SSW-2	72.59	67.17	68.62
DSW-3	73.40	67.69	68.47
SSW-3	72.96	67.65	68.43
DSW-4	73.06	66.98	67.41
DSW-5	72.13	66.55	67.90
SSW-5	72.14	(*)	68.71
DSW-6	71.99	66.20	68.04
DSW-7	73.68	67.70	68.38
DSW-8	71.36	65.78	66.94

\* No water in bottom of casing

REFERENCE 58

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LETTER REPORT  
ANNUAL WATER QUALITY ANALYSES  
CHEVRON ORTHO FACILITY  
SOUTH PLAINFIELD, NEW JERSEY

JOB NO. 3818-095-10  
FEBRUARY 7, 1984

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# Dames & Moore

CRANFORD, NEW JERSEY



GROUND WATER LEVELS

<u>Well No.</u>	<u>Elevation of Top of Casing (ft.)</u>	<u>Ground Water Elevation (ft. above MSL, 11/23/83)</u>
DSW-1	72.83	67.72
DSW-2	73.04	68.51
DSW-3	73.40	68.8
DSW-4	73.06	67.92
DSW-5	72.13	68.45
DSW-6	71.99	68.69
DSW-7	73.68	68.47
DSW-8	71.36	67.49
DSW-9	74.30	67.43
DSW-10	73.60	67.49

REFERENCE 59



STATE OF NEW JERSEY  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WATER RESOURCESPERMIT NO. 25-21842  
APPLICATION NO. \_\_\_\_\_WELL NO. 000

COUNTY \_\_\_\_\_

25-34-515OWNER Little's Surgical Corp. ADDRESS 222 So. Clinton Ave., So. Plainfield, NJOwner's Well No. \_\_\_\_\_ SURFACE ELEVATION \_\_\_\_\_ Feet  
(Above mean sea level)LOCATION Lot 29-28A, Bl. 467A, So. Plainfield, Middlesex Cty.DATE COMPLETED 6/10/81 DRILLER Somerville Well Drilling Co., Inc.DIAMETER: Top 14 inches Bottom 10 inches TOTAL DEPTH 200 FeetCASING: Type Drive Diameter 10 inches Length 80 Feet

SCREEN: Type \_\_\_\_\_ Size of Opening \_\_\_\_\_ Diameter \_\_\_\_\_ inches Length \_\_\_\_\_ Feet

Range in Depth { Top \_\_\_\_\_ Feet  
Bottom \_\_\_\_\_ Feet  
Geologic Formation \_\_\_\_\_

Tail Piece Diameter \_\_\_\_\_ inches Length \_\_\_\_\_ Feet

WELL FLOWS NATURALLY \_\_\_\_\_ Gallons per minute at \_\_\_\_\_ Feet above surface

Water rises to \_\_\_\_\_ Feet above surface

RECORD OF TEST Date 6/10/81 Yield 20 Gallons per minuteStatic water level (before pumping) 10 Feet below surfacePumping level 190 Feet below surface after \_\_\_\_\_ hours pumping

Drawdown \_\_\_\_\_ Feet Specific Gravity \_\_\_\_\_ Gals. and lbs. per ft. of drawdown

How pumped air How measured weightObserved effect on nearby wells none

## PERMANENT PUMPING EQUIPMENT

Type \_\_\_\_\_ Mfr. Name \_\_\_\_\_

Capacity \_\_\_\_\_ G.P.M. Horsepower \_\_\_\_\_ H.P. H.P.M.

Depth of Pump in well \_\_\_\_\_ Feet Depth of Footvalve in well \_\_\_\_\_ Feet

Depth of Air Line in well \_\_\_\_\_ Feet Type of Motor on Pump \_\_\_\_\_ Size \_\_\_\_\_ inches

USED FOR Domestic AMOUNT { Average \_\_\_\_\_ Gallons Daily  
Maximum \_\_\_\_\_ Gallons DailyQUALITY OF WATER good Sample Yes \_\_\_\_\_ No \_\_\_\_\_Taste none Color none Odor none Temp. \_\_\_\_\_ deg.LOG shale Are samples available? \_\_\_\_\_  
(See details on back of sheet or on separate sheet. If sampling was made, attach sample tags.)SOURCE OF DATA Somerville Well Drilling Co., Inc.DATA OBTAINED BY Same as above Date 7/1/81

DEPARTMENT OF CONSERVATION  
AND ECONOMIC DEVELOPMENT  
DIVISION OF WATER POLICY & SUPPLY

25-24-556-1  
Permit No. 25798  
Application No. \_\_\_\_\_  
County \_\_\_\_\_

## WELL RECORD

1. OWNER Explosion Protection Inc. ADDRESS 100 Ridger Avenue, Newark, N.J.  
Owner's Well No. 2 SURFACE ELEVATION \_\_\_\_\_ Feet  
(Above mean sea level)  
3451
2. LOCATION 8. Clinton Ave., S. Plainfield
3. DATE COMPLETED May 21, 1963 DRILLER Sumerville Well Drilling Company
4. DIAMETER: top 8 inches Bottom 8 inches TOTAL DEPTH 100 Feet
5. CASING: Type Drive Diameter 8 inches Length 40 Feet
6. SCREEN: Type \_\_\_\_\_ Size of Opening \_\_\_\_\_ Diameter \_\_\_\_\_ inches Length \_\_\_\_\_ Feet
- Range in Depth { Top \_\_\_\_\_ feet  
Bottom \_\_\_\_\_ feet  
Geologic Formation \_\_\_\_\_
- Tail piece Diameter \_\_\_\_\_ inches Length \_\_\_\_\_ feet
7. WELL FLOWS NATURALLY \_\_\_\_\_ Gallons per minute at \_\_\_\_\_ feet above surface  
Water rises to \_\_\_\_\_ feet above surface
8. RECORD OF TEST: Date May 21, 1963 Yield 200 Gallons per minute  
Static water level before pumping 20 feet below surface  
Pumping level 200 feet below surface after \_\_\_\_\_ hours pumping  
Drawdown 180 feet Specific Gravity 8 GPM per inch per ft. of drawdown  
How Pumped air How used 50 gallon drum  
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT  
Type \_\_\_\_\_ Mfr. Name \_\_\_\_\_  
Capacity \_\_\_\_\_ GPM How Driven \_\_\_\_\_ GPM  
Depth of Pump in well \_\_\_\_\_ feet Depth of Pumps etc. in well \_\_\_\_\_ feet  
Depth of Air Line in well \_\_\_\_\_ feet Type of Water in Pump \_\_\_\_\_ Size \_\_\_\_\_ inches
10. USED FOR Diversions AMOUNT { Average \_\_\_\_\_ Gallons Daily  
Maximum \_\_\_\_\_ Gallons Daily
11. QUALITY OF WATER good Sample No. \_\_\_\_\_  
Taste None Odor None Color clear Turbidity \_\_\_\_\_
12. LOG None Are samples available? No  
(Data collected on back of sheet or on separate sheet. If attaching log use next sheets furnish copy.)
13. SOURCE OF DATA Sumerville Well Drilling Co.
14. DATA OBTAINED BY None Date 5/23/63

DEPARTMENT OF CONSERVATION  
AND ECONOMIC DEVELOPMENT  
DIVISION OF WATER POLICY & SUPPLY

Permit No. 251302  
Application No. \_\_\_\_\_  
County \_\_\_\_\_

## WELL RECORD

221

No. 1 Mine

1. OWNER WILLIAM LADIS ADDRESS 23 WOOLWORTH AVE  
Owner's Well No. \_\_\_\_\_ SURFACE ELEVATION \_\_\_\_\_ Feet  
(Above mean sea level)
2. LOCATION SOUTH PLAINFIELD, N.J.
3. DATE COMPLETED 10/4/65 DRILLER STEVE BLOAK
4. DIAMETER: Top 6 inches Bottom 6 inches TOTAL DEPTH 100 feet
5. CASING: Type BLK. STEEL Diameter 6 inches Length 26 feet
6. SCREEN: Type \_\_\_\_\_ Size of Opening \_\_\_\_\_ Diameter \_\_\_\_\_ inches Length \_\_\_\_\_ feet
- Range in Depth { Top \_\_\_\_\_ feet  
Bottom \_\_\_\_\_ feet
- Geologic formation SAND GRAVEL  
SHALE
- Teil piece: Diameter \_\_\_\_\_ inches Length \_\_\_\_\_ feet
7. WELL FLOWS NATURALLY \_\_\_\_\_ Gallons per minute at \_\_\_\_\_ feet above surface  
Water rises to \_\_\_\_\_ feet above surface
8. RECORD OF TEST Date 10/4/63 Yield 4 Gallons per minute  
Static water level before pumping \_\_\_\_\_ feet below surface  
Pumping level 2 feet below surface after 2 hours pumping  
Drawdown 5 feet Specific Capacity 2.5 gals per min. per ft. of drawdown  
Now Pumped 14111 Now recovered 14111  
Observed effect on nearby wells None
9. PERMANENT PUMPING EQUIPMENT  
Type \_\_\_\_\_ Horse Power \_\_\_\_\_  
Capacity \_\_\_\_\_ G.P.M. Motor Driven \_\_\_\_\_ H.P. \_\_\_\_\_ G.P.M.  
Depth of pump in well \_\_\_\_\_ feet Depth of footpiece in well \_\_\_\_\_ feet  
Depth of Air Line in well \_\_\_\_\_ feet Type of motor on pump \_\_\_\_\_ Size \_\_\_\_\_ inches
10. USED FOR DOMESTIC USE AMOUNT { Average 300 Gallons Daily  
Maximum 600 Gallons Daily
11. QUALITY OF WATER Good Sample: Top \_\_\_\_\_ No. \_\_\_\_\_  
Taste \_\_\_\_\_ Odor NONE Color \_\_\_\_\_ Temp. \_\_\_\_\_ °F
12. LOG \_\_\_\_\_ Are samples available? \_\_\_\_\_  
(Give details on back of sheet or on separate sheet of station log and data record  
Furnish copy)
13. SOURCE OF DATA DRILLER
14. DATA OBTAINED BY \_\_\_\_\_ Date 10/4/65

REFERENCE 60

ANALYTICAL DATA  
 LR METALS  
 SAMPLING DATE: 4/11/85  
 CASE: 4175

02-8409-17A/NJK9

VOLATILES



SAMPLE NUMBER MATRIX UNITS	NJK9-S1 SOIL ug/Kg	NJK9-S2 SOIL ug/Kg	NJK9-S3 SOIL ug/Kg	NJK9-GW5 WATER ug/l	NJK9-GW1 WATER ug/l	NJK9-GW2 WATER ug/l	NJK9-GW4 WATER ug/l	NJK9-GW3 WATER ug/l
Chloromethane				E	E	E	E	E
Bromomethane				E	E	E	E	E
Vinyl Chloride				E	E	E	E	E
Chloroethane				E	E	E	E	E
Methylene Chloride	91B	E	E	E	E	E	E	E
Acetone	660	45	J	E	E	E	E	E
Carbondisulfide				E	E	E	E	E
1,1-Dichloroethene				E	E	E	E	E
1,1-Dichloroethane				E	E	E	E	E
Trans-1,2-Dichloroethene				E	E	E	E	E
Chloroform				E	E	E	E	E
1,2-Dichloroethane				E	E	E	E	E
2-Butanone				E	E	E	E	E
1,1,1-Trichloroethane				E	E	E	E	E
Carbon Tetrachloride				E	E	E	E	E
Vinyl Acetate				E	E	E	E	E
Bromodichloromethane				E	E	E	E	E
1,1,2,2-Tetrachloroethane				E	E	E	E	E
1,2-Dichloropropane				E	E	E	E	E
Trans-1,3-Dichloropropene				E	E	E	E	E
Trichloroethene				E	E	E	E	E
Dibromochloromethane				E	E	E	E	E
1,1,2-Trichloroethane				E	E	E	E	E
Benzene				E	E	E	E	E
Cis-1,3-Dichloropropene				E	E	E	E	E
2-Chloroethylvinylether				E	E	E	E	E
Bromoform				E	E	E	E	E
2-Hexanone				E	E	E	E	E
4-Methyl-2-Pentanone	E	E	E	E	E	E	E	E
Tetrachloroethene	45BJ	5B	E	E	E	E	E	E
Toluene				E	E	E	E	E
Chlorobenzene				E	E	E	E	E
Ethylbenzene				E	E	E	E	E
Styrene				E	E	E	E	E
Total Xylenes				E	E	E	E	E

NOTES:

Blank space - compound analyzed for but not detected  
 E - analysis did not pass QA/QC requirements  
 J - compound present below the specified detection limit

☆ WELL DATA FROM METZ METALLURGICAL

ANALYTICAL DATA  
 LR METALS  
 SAMPLING DATE: 4/11/85  
 CASE: 4175

SEMI-VOLATILES

SAMPLE NUMBER MATRIX UNITS	NJK9-S1 SOIL ug/Kg	NJK9-S2 SOIL ug/Kg	NJK9-S3 SOIL ug/Kg	NJK9-GW5 WATER ug/l	NJK9-GW1 WATER ug/l	NJK9-GW2 WATER ug/l	NJK9-GW4 WATER ug/l	NJK9-GW3 WATER ug/l
N-Nitrosodimethylamine								
Phenol								
Aniline								
Bis(2-Chloroethyl)Ether								
2-Chlorophenol								
1,3-Dichlorobenzene								
1,4-Dichlorobenzene								
Benzyl Alcohol								
1,2-Dichlorobenzene								
2-Methylphenol								
Bis(2-Chloroisopropyl)Ether								
4-Methylphenol								
N-Nitroso-Di-n-Propylamine								
Hexachloroethane								
Nitrobenzene								
Isophorone								
2-Nitrophenol								
2,4-Dimethylphenol								
Benzoic Acid								
Bis(2-Chloroethoxy)Methane								
2,4-Dichlorophenol								
1,2,4-Trichlorobenzene								
Naphthalene								
4-Chloroaniline								
Hexachlorobutadiene								
4-Chloro-3-Methylphenol								
2-Methylnaphthalene								
Hexachlorocyclopentadiene								
2,4,6-Trichlorophenol								
2,4,5-Trichlorophenol								
2-Chloronaphthalene								
2-Nitroaniline								
Dimethyl Phthalate								
Acenaphthylene								
3-Nitroaniline								
Acenaphthene								
2,4-Dinitrophenol								
4-Nitrophenol								
Dibenzofuran								
2,4-Dinitrotoluene								
2,6-Dinitrotoluene								
Diethyl Phthalate								
4-Chlorophenylphenylether								
Fluorene								
4-Nitroaniline								



ANALYTICAL DATA  
 LR METALS  
 SAMPLING DATE: 4/11/85  
 CASE: 4175



SEMI-VOLATILES

SAMPLE NUMBER	NJK9-S1	NJK9-S2	NJK9-S3	NJK9-GW5	NJK9-GW1	NJK9-GW2	NJK9-GW4	NJK9-GW3
MATRIX	SOIL	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER
UNITS	ug/Kg	ug/Kg	ug/Kg	ug/l	ug/l	ug/l	ug/l	ug/l
4,6-Dinitro-2-Methylphenol								
N-Nitrosodiphenylamine								
4-Bromophenylphenylether								
Hexachlorobenzene								
Pentachlorophenol								
Phenanthrene								
Anthracene								
Di-n-Butylphthalate								
Fluoranthene								
Benzidine								
Pyrene								
Butylbenzylphthalate								
3,3'-Dichlorobenzidine								
Benzo(a)Anthracene								
Bis(2-Ethylhexyl)Phthalate				E	E	E	E	E
Chrysene								
Di-n-Octyl Phthalate								
Benzo(b)Fluoranthene								
Benzo(k)Fluoranthene								
Benzo(a)Pyrene								
Indeno(1,2,3-cd)Pyrene								
Dibenzo(a,h)Anthracene								
Benzo(ghi)Perylene								

NOTES:

Blank space - compound analyzed for but not detected  
 E - analysis did not pass QA/QC requirements  
 J - compound present below the specified detection limit

ANALYTICAL DATA  
 LR METALS  
 SAMPLING DATE: 4/11/85  
 CASE: 4175



PESTICIDES/PCBs

SAMPLE NUMBER MATRIX UNITS	NJK9-S1 SOIL ug/Kg	NJK9-S2 SOIL ug/Kg	NJK9-S3 SOIL ug/Kg	NJK9-GW5 WATER ug/l	NJK9-GW1 WATER ug/l	NJK9-GW2 WATER ug/l	NJK9-GW4 WATER ug/l	NJK9-GW3 WATER ug/l
Alpha-BHC								
Beta-BHC								
Delta-BHC								
Gamma-BHC (Lindane)								
Heptachlor								
Aldrin								
Heptachlor Epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD		19						
Endosulfan sulfate								
Endrin Aldehyde								
4,4'-DDT		29						
Methoxychlor								
Endrin Ketone								
Chlordane								
Toxaphene								
Arochlor-1016								
Arochlor-1221								
Arochlor-1232								
Arochlor-1242								
Arochlor-1248								
Arochlor-1254								
Arochlor-1260								

NOTES:

Blank space - compound analyzed for but not detected  
 E - analysis did not pass QA/QC requirements  
 J - compound present below the specified detection limit



ANALYTICAL DATA  
 LR METALS  
 SAMPLING DATE: 4/11/85  
 CASE: 4175

INORGANICS								
SAMPLE NUMBER	NJK9-S1	NJK9-S2	NJK9-S3	NJK9-GW5	NJK9-GW1	NJK9-GW2	NJK9-GW4	NJK9-GW3
MATRIX	SOIL	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER
UNITS	mg/Kg	mg/Kg	mg/Kg	ug/l	ug/l	ug/l	ug/l	ug/l
Aluminum	29444	27494	20497	J	J	J	220	258
Antimony	J	J	J	J	J	J	J	J
Arsenic	30	26						
Barium	217	331	201		J	248	200	352
Beryllium								
Cadmium	J	J	J					
Calcium	3179	5662	24812	J	59990	42350	49870	55840
Chromium	J	J	J					
Cobalt	J	J	J					
Copper	J	J	J		148			72
Iron	57000	71734	90188	J	142	J	150	425
Lead	J	J	J	7.0	E	E	E	E
Magnesium	11722	10582	9073	J	6151	17580	21200	18480
Manganese	1316	1983	970					37
Mercury								
Nickel	E	E	E					
Potassium	J	J	J					
Selenium								
Silver	J	J	J	E	E	E	E	E
Sodium	10533	J	J	J	13110	12060	13200	17000
Thallium	J	J	J					
Tin	J	J	J	E	E	E	E	E
Vanadium	66	67	79					
Zinc	J	J	J	30	E	E	E	E

NOTES:

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 E - analysis did not pass QA/QC requirements  
 J - compound present below the specified detection limit

Environmental Protection Agency, OLP Sample Management Office.  
P.O. Box 818, Alexandria, Virginia 22313 703/557-2430

Sample Number  
BA979

Organics Analysis Data Sheet  
(Page 1)

LABORATORY NAME: UNITED STATES TESTING CO., INC  
LAB SAMPLE ID NO: 77178-7  
SAMPLE MATRIX: WATER  
DATA RELEASE AUTHORIZED BY *[Signature]*

CASE NO: 4175  
GC REPORT NO: 178  
CONTRACT NO: 68-01-6760  
DATE SAMPLE RECEIVED: 4-12-85

*[Signature]*  
VOLATILE COMPOUNDS

CONCENTRATION: LOW  
DATE EXTRACTED/PREPARED: 4-24-85  
DATE ANALYZED: 4-24-85  
CONC/DIL FACTOR: 1  
PERCENT MOISTURE: NA  
PERCENT MOISTURE (DECANTED): NA

PH 7.70

*Data Reported because exceeded  
7 day holding time*

CAS NUMBER		ug/l	CAS NUMBER		ug/l
74-87-3	CHLOROMETHANE	10 U	79-34-5	1,1,2,2-TETRACHLOROETHANE	5 U
74-83-9	BROMOMETHANE	10 U	78-87-5	1,2-DICHLOROPROPANE	5 U
75-01-4	VINYL CHLORIDE	10 U	10061-02-6	TRANS-1,3-DICHLOROPROPENE	5 U
75-00-3	CHLOROETHANE	10 U	79-01-6	TRICHLOROETHENE	29
75-09-2	METHYLENE CHLORIDE	9 U	124-48-1	DIBROMOCHLOROMETHANE	5 U
67-64-1	ACETONE	21	79-00-5	1,1,2-TRICHLOROETHANE	5 U
75-15-0	CARBON DISULFIDE	5 U	71-43-2	BENZENE	5 U
75-35-4	1,1-DICHLOROETHENE	5 U	10061-01-5	CIS-1,3-DICHLOROPROPENE	5 U
75-35-4	1,1-DICHLOROETHANE	5 U	110-75-8	2-CHLOROETHYL VINYLETHER	10 U
155-60-5	TRANS-1,2-DICHLOROETHENE	5 U	75-25-2	BROMOFORM	5 U
67-66-3	CHLOROFORM	5 U	591-78-6	2-HEXANONE	10 U
107-06-2	1,2-DICHLOROETHANE	5 U	108-10-1	4-METHYL-2-PENTANONE	2 <i>BT</i>
78-93-3	2-BUTANONE	10 U	127-16-4	TETRACHLOROETHENE	4 <i>J</i>
71-55-6	1,1,1-TRICHLOROETHANE	5 U	108-88-3	TOLUENE	5 U
56-23-5	CARBON TETRACHLORIDE	5 U	106-90-7	CHLOROBENZENE	5 U
108-05-4	VINYL ACETATE	10 U	100-41-4	ETHYLBENZENE	5 U
75-27-4	BROMODICHLOROMETHANE	5 U	100-42-5	STYRENE	5 U
				TOTAL XYLENES	5 U

Value If the result is a value greater than or equal to the detection limit, report the value.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS.

Indicates compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

B Analyte was found in the blank as well as the sample. Indicates possible/probable blank contamination.

J Indicates an estimated value.

Environmental Protection Agency, CLP Sample Management Office.  
P.O. Box 818. Alexandria, Virginia 22313 703/557-2430

Sample Number  
BA979

Organics Analysis Data Sheet  
(Page 1)

LABORATORY NAME: UNITED STATES TESTING CO., INC

LAB SAMPLE ID NO: 77178-7

SAMPLE MATRIX: WATER

DATA RELEASE AUTHORIZED BY

VOLATILE COMPOUNDS

CONCENTRATION: LOW  
DATE EXTRACTED/PREPARED: 4-24-85  
DATE ANALYZED: 4-24-85  
CONC/DIL FACTOR: 1  
PERCENT MOISTURE NA  
PERCENT MOISTURE (DECANTED) NA

CASE NO: 4175  
GC REPORT NO: 178  
CONTRACT NO: 68-01-6760  
DATE SAMPLE RECEIVED: 4-12-85

*This is an NUS. Determination of a statement appearing on these laboratory results.*

*Data Rejected because exceeded 7 day holding time.*

pH 7.70

CAS NUMBER		ug/l	CAS NUMBER		ug/l
74-87-3	CHLOROMETHANE	10 U	79-34-5	1,1,2,2-TETRACHLOROETHANE	5 U
74-83-9	BROMOMETHANE	10 U	78-67-5	1,2-DICHLOROPROPANE	5 U
75-01-4	VINYL CHLORIDE	10 U	10061-02-6	TRANS-1,3-DICHLOROPROPENE	5 U
75-00-3	CHLOROETHANE	10 U	79-01-6	TRICHLOROETHENE	29
75-09-2	METHYLENE CHLORIDE	9 B	124-48-1	DIBROMOCHLOROMETHANE	5 U
67-64-1	ACETONE	21	79-00-5	1,1,2-TRICHLOROETHANE	5 U
75-15-0	CARBON DISULFIDE	5 U	71-43-2	BENZENE	5 U
75-35-4	1,1-DICHLOROETHENE	5 U	10061-01-5	CIS-1,3-DICHLOROPROPENE	5 U
75-35-4	1,1-DICHLOROETHANE	5 U	110-75-8	2-CHLOROETHYL VINYLETHER	10 U
156-60-5	TRANS-1,2-DICHLOROETHENE	5 U	75-25-2	BROMOFORM	5 U
67-66-3	CHLOROFORM	5 U	591-78-6	2-HEXANONE	10 U
107-06-2	1,2-DICHLOROETHANE	5 U	108-10-1	4-METHYL-2-PENTANONE	2 BJ
78-93-3	2-BUTANONE	10 U	127-16-4	TETRACHLOROETHENE	4 J
71-55-6	1,1,1-TRICHLOROETHANE	5 U	106-88-3	TOLUENE	5 U
56-23-5	CARBON TETRACHLORIDE	5 U	106-50-7	CHLOROBENZENE	5 U
108-05-4	VINYL ACETATE	10 U	100-41-4	ETHYLBENZENE	5 U
75-27-4	BROMODICHLOROMETHANE	5 U	100-42-5	STYRENE	5 U
				TOTAL XYLENES	5 U

Value If the result is a value greater than or equal to the detection limit, report the value.

C

This flag applies to pesticide parameters where the identification has been confirmed by GC/MS.

Indicates compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

B

Analyte was found in the blank as well as the sample. Indicates possible/probable blank contamination.

Indicates an estimated value.

J

Environmental Protection Agency. CLP Sample Management Office.  
P.O. Box 818. Alexandria, Virginia 22313 703/557-2450

Sample Number  
BA979

Organics Analysis Data Sheet  
(Page 2)

Semivolatile Compounds

CONCENTRATION: LOW  
DATE EXTRACTED/PREPARED: 4/15/85  
DATE ANALYZED: 4/17/85  
CONC/DIL FACTOR: 1L:2ML

CAS NUMBER		ug/l	CAS NUMBER		ug/l
2-75-9	N-NITROSODIMETHYLAMINE	20 U	83-32-9	ACENAPHTHENE	20 U
106-95-2	PHENOL	20 U	51-28-5	2,4-DINITROPHENOL	100 U
2-53-3	ANILINE	20 U	100-02-7	4-NITROPHENOL	100 U
11-44-4	BIS (2-CHLOROETHYL) ETHER	20 U	132-64-9	DIBENZOFURAN	20 U
95-57-8	2-CHLOROPHENOL	20 U	121-14-2	2,4-DINITROTOLUENE	20 U
541-73-1	1,3-DICHLOROBENZENE	20 U	606-20-2	2,6-DINITROTOLUENE	20 U
106-46-7	1,4-DICHLOROBENZENE	20 U	84-66-2	DIETHYLPHTHALATE	20 U
100-51-6	BENZYL ALCOHOL	20 U	7005-72-3	4-CHLOROPHENYLPHENYLETHER	20 U
95-50-1	1,2-DICHLOROBENZENE	20 U	86-73-7	FLUORENE	20 U
95-48-7	2-METHYLPHENOL	20 U	100-01-6	4-NITROANILINE	100 U
89538-32-9	BIS (2-CHLOROISOPROPYL) ETHER	20 U	534-52-1	4,6-DINITRO-2-METHYL PHENOL	100 U
106-44-5	4-METHYLPHENOL	20 U	86-30-6	N-NITROSODIPHENYLAMINE (1)	20 U
521-64-7	N-NITROSO-DI-N-PROPYLAMINE	20 U	101-55-3	4-BROMOPHENYL-PHENYLETHER	20 U
67-72-1	HEXACHLOROETHANE	20 U	118-74-1	HEXACHLOROBENZENE	20 U
98-95-3	NITROBENZENE	20 U	87-86-5	PENTACHLOROPHENOL	100 U
78-59-1	ISOPHORONE	20 U	85-01-8	PHENANTHRENE	20 U
68-75-5	2-NITROPHENOL	20 U	120-12-7	ANTHRACENE	20 U
105-67-9	2,4-DIMETHYLPHENOL	20 U	84-74-2	DI-N-BUTYLPHTHALATE	20 U
65-85-0	BENZOIC ACID	100 U	206-44-0	FLUORANTHENE	20 U
111-91-1	BIS-2-CHLOROETHOXYMETHANE	20 U	92-87-5	BENZIDINE	100 U
120-83-2	2,4-DICHLOROPHENOL	20 U	129-00-0	PYRENE	20 U
120-82-1	1,2,4-TRICHLOROBENZENE	20 U	65-68-7	BUTYLBENZYLPHTHALATE	20 U
51-20-3	NAPHTHALENE	20 U	91-94-1	3,3'-DICHLOROBENZIDINE	40 U
106-47-8	4-CHLOROANILINE	20 U	56-55-3	BENZO(A)ANTHRACENE	20 U
87-68-3	HEXACHLOROBTADIENE	20 U	117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	145, B
69-50-7	4-CHLORO-3-METHYL PHENOL	20 U	218-01-9	CHRYSENE	20 U
91-57-5	2-METHYLNAPHTHALENE	20 U	117-84-0	DI-N-OCTYL PHTHALATE	20 U
77-47-4	HEXACHLOROCYCLOPENTADIENE	20 U	205-99-2	BENZO (B) FLUORANTHENE	20 U
88-05-2	2,4,6-TRICHLOROPHENOL	20 U	207-08-9	BENZO (K) FLUORANTHENE	20 U
55-55-4	2,4,5-TRICHLOROPHENOL	100 U	50-32-8	BENZO (A) PYRENE	20 U
91-56-7	2-CHLORONAPHTHALENE	20 U	153-35-5	INDENO (1,2,3-CD) PYRENE	20 U
66-74-4	2-NITROANILINE	100 U	53-70-3	DIBENZO (A,H) ANTHRACENE	20 U
131-11-3	DIMETHYL PHTHALATE	20 U	191-24-2	BENZO (G,h,i) PERYLENE	20 U
208-98-8	ACENAPHTHYLENE	20 U			
99-09-2	3-NITROANILINE	100 U			

(1) CANNOT BE SEPARATED FROM DIPHENYLAMINE

Sample Number  
BA979

Organics Analysis Data Sheet  
(Page 3)

Pesticide/PCBs

CONCENTRATION: LOW  
DATE EXTRACTED/PREPARED: 4-15-85  
DATE ANALYZED: 4-19-85  
CONC/DIL FACTOR: 1L:10ML

CAS NUMBER		ug/l
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC(Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	Endrin Aldehyde	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin Ketone	0.10 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1 U
11096-82-5	Aroclor-1260	1 U

Vi = Volume of extract injected (ul)  
Vs = Volume of water extracted (ml)  
Ws = Weight of sample extracted (g)  
Vt = Volume of total extract (ul)

Vs \_\_\_\_\_

or Ws \_\_\_\_\_

Vt \_\_\_\_\_

Vi \_\_\_\_\_

Direct Laboratory Program  
 Management Office  
 18 - Alexandria, VA 22313  
 490 FTS: 8-557-2490

EPA Sample No.

MBB 280

Date 5-17-85

## INORGANIC ANALYSIS DATA SHEET

NAME CHEMTECH CONSULTING GROUP

CASE NO. 4175

✓ NO. 784

QC REPORT NO. 468

LAB SAMPLE ID. NO. G2-468-92

## Elements Identified and Measured

Concentration: Low ☒ Medium ☐  
 Matrix: Water ☒ Soil ☐ Sludge ☐ Other ☐

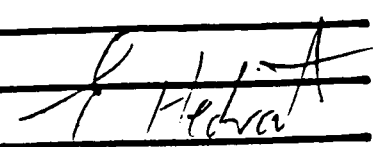
(ug/L or ug/kg dry weight (Circle One))

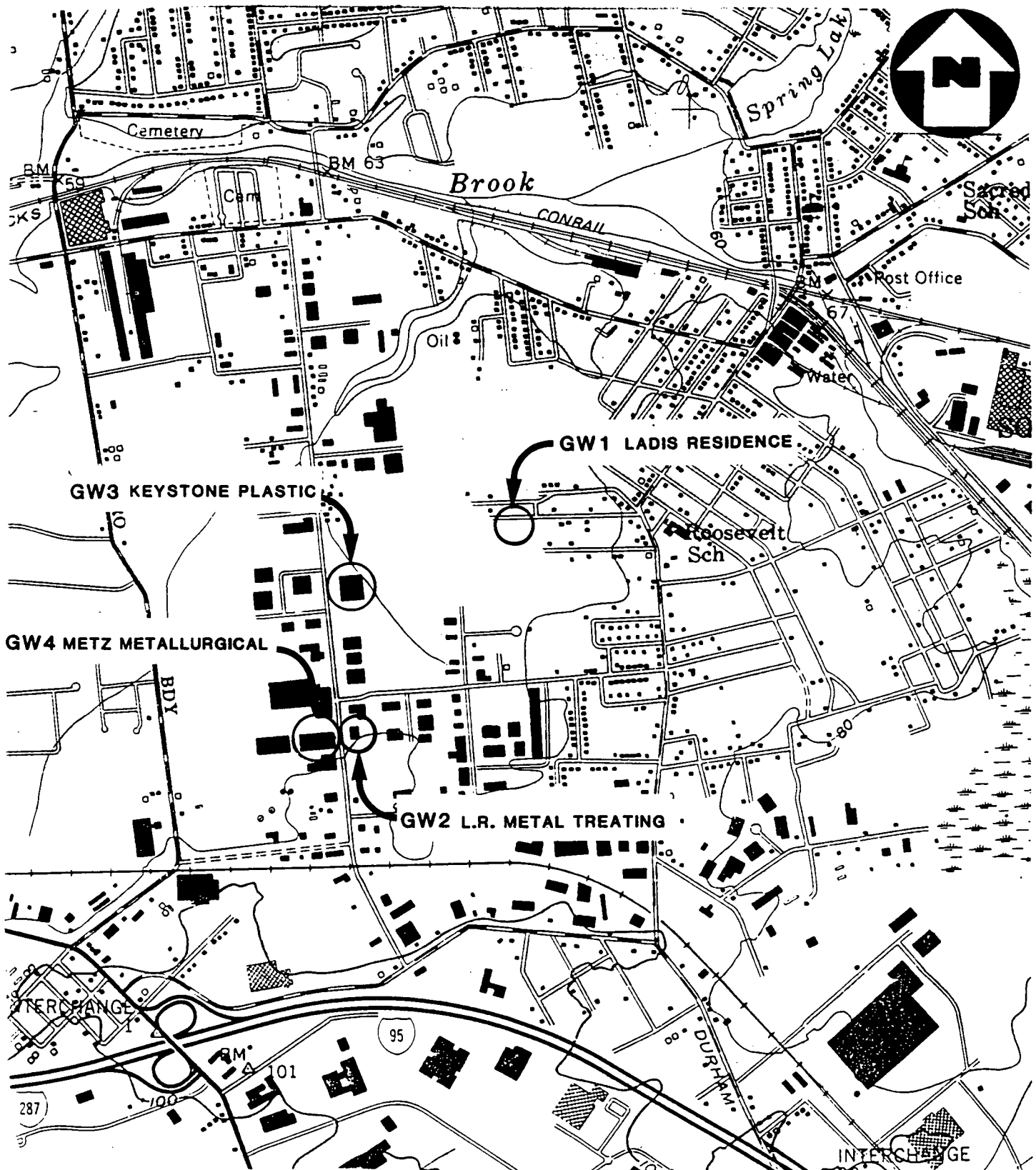
1. Aluminum	220 P.	13. Magnesium	21200 P.
2. Antimony	50 UP.	14. Manganese	15 UP.
3. Arsenic	10 UFR.	15. Mercury	0.2 UP.
4. Barium	200 P.	16. Nickel	20 UP.
5. Beryllium	5 UP.	17. Potassium	1000 UP.
6. Cadmium	5 UP.	18. Selenium	5 UFR.
7. Calcium	49870 P.	19. Silver	10 UP.
8. Chromium	10 UP.	20. Sodium	13200 P.
9. Cobalt	20 UP.	21. Thallium	10 UFR.
10. Copper	20 UP.	22. Tin	30 UFR.
11. Iron	150 P.	23. Vanadium	20 UP.
12. Lead	5 UP.	24. Zinc	57 P.*
Cyanide	NR	Percent Solids (%)	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

Lab Manager





(QUAD) PLAINFIELD, N.J.

**GROUNDWATER SAMPLE LOCATION MAP**  
**L.R. METAL TREATING, S. PLAINFIELD, N.J.**

(NOT TO SCALE)

**FIGURE 3**

REFERENCE 61



# INTERIM SOIL SURVEY REPORT

## MIDDLESEX COUNTY, NEW JERSEY

### NATIONAL COOPERATIVE SOIL SURVEY



Prepared by  
U.S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

In cooperation with  
NEW JERSEY AGRICULTURAL EXPERIMENT STATION  
COOK COLLEGE, RUTGERS, THE STATE UNIVERSITY  
and  
NEW JERSEY STATE SOIL CONSERVATION COMMITTEE



April 1978

NEW JERSEY  
DATE: 3/78  
MLRA: 148

SOIL PROPERTIES AND SOIL SURVEY INTERPRETATIONS  
Prepared by Soil Conservation Service,  
USDA in Cooperation With Rutgers University  
and New Jersey Department of Agriculture

Ellington variant soils are moderately deep, moderately well drained, reddish sandy soils of the stream terraces or outwash plains. The soils have a sandy loam or loam surface and subsoil textures. Slopes are nearly level to gently sloping. The underlying bedrock is shale or sandstone.

Natural fertility and available water capacity are moderate. Permeability is moderate to moderately rapid.

Advance Copy - Subject to Change

SERIES: Ellington Variant  
MAP SYMBOLS:  
Sandy loam 7N23-A,B  
7N2U-A (Ellington Variant  
part of complex only)

CLASSIFICATION:  
Aquic Dystrachrepts, coarse  
loamy, mixed, mesic

STREAM OVERFLOW HAZARD: None to slight DEPTH TO BEDROCK: 2 1/2 to 3 feet DEPTH TO SEASONALLY HIGH WATER: 1 to 4 feet

FROST ACTION POTENTIAL:

DURATION:

ESTIMATED PHYSICAL AND CHEMICAL PROPERTIES (* Based on test data)													
Hor- i- zons	Typical depth from surface  inches	Classification			Coarse frag- ments > 3 inches  %	Fractions passing sieve numbers				Liquid limit  %	Plastic index  %	Fraction smaller than 2 mm	
		USDA Texture Class 1/	Unified 2/	AASHTO 3/		No. 4 4.7 mm	No. 10 2.0 mm	No. 40 0.42 mm	No. 200 0.074mm			Silt 0.05- 0.002mm	Clay <0.002mm
						%	%	%	%			%	%
A	0-20	sl	ML,CL, SM,SC	A-4	0-3	90-100	80-95	70-80	40-60	20-30	5-10	35-55	10-20
B	20-36	sl,fsl,sil, l	ML,CL, SM,SC	A-4	0-3	90-100	80-95	65-80	40-60	20-30	5-10	35-55	10-20
CR	36+	shale or sandstone bedrock											

Depth from surface	Permea- bility	Available water 5/	Soil reaction, natural	Cation exchange capacity	Resis- tivity	Organic matter	Bulk density, in place	Maximum compacted density	Optimum moisture content	Shrink- swell potential	Consistence in place
inches	inches per hour	inches/in of soil	pH	meq/100gm	1000 ohms/cm	%	gm/cc	lbs/cu ft	%		
0-20	.60-6.0	.13-.19	5.0-6.0	5-10	-	2-4	1.1-1.3	100-110	15-20	Low	Friable
20-36	.60-6.0	.13-.19	5.0-6.0	5-10	2-5+	-	1.2-1.4	105-115	15-20	Low	Friable

SUITABILITY OF SOILS AS SOURCE OF MATERIALS

Topsoil	Good to fair: available water capacity moderate
Sand and gravel	Unsuitable: excessive fines, moderately deep to shale bedrock
Roadfill	Fair: HL,CL,SM,SC for A and B horizons, excessive fines
Embankment materials	Fair: stability fair, compaction fair to good, resistance to piping poor

AGRICULTURAL INTERPRETATIONS

Slope & erosion 6/	Land capability class, subclass and unit	Produc- tivity index for corn	Farmland assessment soil groups	Wildlife Suitability 7/			Woodland		Erodi- bility ("K" factor)	Hydro- logic soil group
				Open- land	Wood- land	Wet- land	Suita- bility group	Species		
A	IIw-73	8	B	1	1	3	2w	Upland oaks	.24	B
B	IIw-73	7	B	1	1	4				

1/ BY-bouldery; C-clay; CN-channery; CB-cobbly; F-fine;  
GR-gravelly; L-loam; R-rocky; S-sand; SH-shaly; SI-silt;  
ST-stony; STV-very stony; STX-extremely stony.

2/ Unified Classification, Corps of Engineers.

3/ American Association of State Highway and Transportation  
Officials.

4/ NL- Nonliquid; NP - Nonplastic.

5/ Field capacity minus 15 atmospheres.  
6/ A-0-2%; B-2-5%; C-%; D-%; E-%.  
7/ Ratings: 1-Good; 2-Fair; 3-Poor; 4-Very Poor.  
8/ Additional water may be available seasonally  
from Groundwater.  
\* Rutgers Agricultural Experiment Station and Soil  
Conservation Service SSIR #26 (4)  
\*\* Rutgers Engineering soil survey for

New Jersey  
Date: 3/78  
MLRA: 148

SOIL PROPERTIES AND SOIL SURVEY INTERPRETATIONS  
Advance Copy - Subject to change

Prepared by Soil Conservation Service, USDA in  
Cooperation with Rutgers University

Klinesville soils are reddish well drained moderately coarse textured soils containing much soft shale fragments especially in the lower part of the profile. They are shallow to shattered red shale bedrock. The soils are on gentle to steep slopes.

Natural fertility is medium and available water capacity is low. Permeability is moderately rapid.

STREAM OVERFLOW HAZARD: None

DEPTH TO BEDROCK: 1-1½ feet DEPTH TO SEASONALLY HIGH WATER: 3-5 feet+

SERIES: Klinesville

Shaly loam 5114 C  
5214 B,C,D,E

521U-B (Klinesville part  
of complex only)

Classification:  
Lithic Dystrachrepts,  
loamy-skeletal, mixed, mesic

ESTIMATED PHYSICAL AND CHEMICAL PROPERTIES (based on test data)

Hor- i- zons	Typical depth from surface  inches	Classification			Coarse frag- ments >3 in.  %	Fractions passing sieve numbers				Liquid limit  4/ %	Plastic index  4/ %	Fraction smaller than 2mm	
		USDA Texture Class 1/  %	Unified 2/  %	AASHTO 3/  %		No. 4 4.75 mm %	No. 10 2.0 mm %	No. 40 0.425 mm %	No. 200 0.075 mm %			Silt 0.05- 0.002mm %	Clay <0.002mm %
Ap	0-7	shl	ML,CL	A-4, A-6	0	90-100	85-100	85-95	60-75	25-40	3-15	30-50	12-20
B,C	7-18	shl,vshl	SM,SC,ML, CL,GM,GP, GC	A-1, A-2, A-4	10-30	30-85	30-85	10-70	5-55	20-40	0-10	25-45	10-15
R	18+	Rippable shale											

Depth from surface  inches	Perme- ability  Inches per hour	Available water 5/ Inches/in of soil	Soil reaction, natural pH	Cation exchange capacity meq/100gm	Resis- tivity 1000 Ohms/cm	Organic matter %	Bulk density, in place gm/cc	Maximum compacted density lbs/cu ft	Optimum moisture content %	Shrink- swell potential	Consistence, in place
0-7	2.0-6.0	.11-.15	4.5-5.5	5-10	5+	2-6	1.3-1.5	-	-	Low	Friable
7-18	2.0-6.0	.08-.12	4.5-5.0	5-10	-	0-2	1.4-1.6	110-125	8-20	Low	Friable

SUITABILITY OF SOILS AS SOURCE OF MATERIALS

Topsoil	Poor: limited amount, shallow to bedrock
Sand and gravel	Unsuitable: none present
Roadfill	Poor: limited supply, shallow to bedrock
Embankment materials	Fair stability, fair to good compaction characteristics, fair to poor resistance to piping, high shale content

AGRICULTURAL INTERPRETATIONS

Slope and erosion 6/  B C D E	Land capability class subclass and unit IIIe-66 IVe-66 VIe-66 VIIe-66	Produc- tivity index for corn	Farmland Assessment Soil Groups C D D E	Wildlife Suitability			Woodland		Erodi- bility ("K" factor)	Hydro- logic Soil Group
				Open- land	Wood- land	Wetland	Suita- bility Group	Species		
B	IIIe-66	-	C	3	1	4	4d	Black oak White oak Chestnut oak	.20	C
C	IVe-66	-	D	3	1	4				
D	VIe-66	-	D	3	1	4				
E	VIIe-66	-	E	3	1	4				

1/ b-bouldery; c-clay, clayey; ch-channery; co-cobbly;  
e-extremely; f-fine; g-gravel, gravelly; l-loam, loamy; r-rocky;  
s-sand, sandy; sh-shaly; si-silt, silty; st-stony; v-very.  
2/ Unified classification, Corps of Engineers.  
3/ American Association of State Highway Officials.  
4/ NL - Nonliquid; NP - Nonplastic.

5/ Field capacity minus 15 atmospheres.  
6/ A- %; B-2-5%; C-5-10%; D-10-15%; E-15-25%  
7/ Ratings: 1-Good; 2-Fair; 3-Poor; 4-Very Poor.  
8/ Additional water may be available seasonally from  
groundwater.  
\*\* Rutgers Engineering soil surveys for Hunterdon and  
Somerset Counties.

Hc

REFERENCE 62

United States  
Department of  
Agriculture

Soil  
Conservation  
Service

In cooperation with  
New Jersey Agricultural  
Experiment Station,  
Cook College,  
Rutgers,  
the State University,  
and the  
New Jersey Department of  
Agriculture

# Soil Survey of Middlesex County New Jersey



bedrock, Dunellen soils, soils that are gravelly or that contain gravel strata, and soils that have a layer 2 to 6 inches thick of silty clay immediately above the red shale bedrock. These inclusions make up as much as 25 percent of the unit and generally require the same management as this Ellington Variant soil. Also included are small areas of Rowland and Parsippany Variant soils that make up as much as 10 percent of the unit. The Rowland soils require protection from flooding, and Parsippany Variant soils require drainage. The areas that are less than 20 inches deep to red shale bedrock and the Dunellen soils are on slight knolls or near the edges of the unit. The Rowland and Parsippany Variant soils are in drainageways throughout the unit.

The permeability of this Ellington Variant soil is moderate to moderately rapid. Available water capacity is moderate. Runoff is slow. Tilth is good, and the organic matter content is moderate. Roots extend to the rock at a depth of about 36 inches, but a few penetrate into cracks in the rock. In unlimed areas the surface layer and the subsoil commonly are very strongly acid. The hazard of erosion is slight. Red shale bedrock is at a depth of 20 to 40 inches. A seasonal high water table is at a depth of 1 to 3 feet.

Most of the acreage of this soil is in woodland or urban uses.

This soil is suited to cultivated crops and to hay and pasture. The soil is droughty during some growing seasons because of the restricted root zone. Seasonal wetness and the hazard of erosion are the main management concerns. The use of lime and fertilizer helps to offset the acidity and increase fertility. If the soil is cultivated, conservation tillage, the use of cover crops and grasses and legumes in the cropping system, and the use of crop residue help to reduce runoff and control erosion.

Establishing and maintaining a mixture of grasses and legumes and proper grazing are major pasture management concerns. Rotation grazing, deferred grazing, and the use of fertilizer are the main practices of pasture management.

This soil is suited to trees, and potential productivity is moderately high. The main species are water-tolerant oaks, yellow poplar, and sweetgum.

This soil is limited for many urban uses by the seasonal high water table. The water table and a frost-action potential are limitations of the soil as a site for houses with basements, septic tank absorption fields, and local roads and streets.

Capability subclass: IIw.

**EoB—Ellington Variant sandy loam, 2 to 5 percent slopes.** This soil is gently sloping and moderately well drained. It is on slight knolls on glacial outwash terraces principally in South Plainfield, Edison, and Plainsboro Townships. Slopes are smooth or convex. The areas of this soil range mainly from 30 to 300 acres.

Typically, the surface layer is dark brown sandy loam about 4 inches thick. The subsurface layer is strong brown fine sandy loam 16 inches thick. The subsoil is yellowish red fine sandy loam about 16 inches thick. The red shale bedrock is at a depth of 36 inches.

Included with this soil in mapping are small areas of sandy loam that is less than 20 inches deep to red shale bedrock, Dunellen soils, and soils that are gravelly or that contain strata of gravel. Together, they make up as much as 25 percent of the unit, and they generally require the same management as this Ellington Variant soil. Also included are small areas of Rowland and Parsippany Variant soils that make up as much as 10 percent of the unit. The Rowland soils require protection from flooding, and the Parsippany Variant soils require drainage. The areas that are less than 20 inches deep to red shale bedrock and the Dunellen soils are on slight knolls or near the edges of the unit. The Rowland and Parsippany Variant are in drainageways throughout the unit.

The permeability of this Ellington Variant soil is moderate to moderately rapid. Available water capacity is moderate. Runoff is medium. Tilth is good, and the organic matter content is moderate. Roots extend to the rock at a depth of about 36 inches, but a few penetrate into cracks in the rock. In unlimed areas the surface layer and the subsoil commonly are very strongly acid. The hazard of erosion is moderate. Red shale bedrock is at a depth of 20 to 40 inches. A seasonal high water table is at a depth of 1 to 3 feet.

Most of the acreage of this soil is in woodland or urban uses.

This soil is suited to cultivated crops and to hay and pasture. The soil is droughty during some growing seasons because of the restricted root zone. Seasonal wetness and the hazard of erosion are the main management concerns. The use of lime and fertilizer helps to offset the acidity and increase fertility. If the soil is cultivated, conservation tillage, the use of cover crops and grasses and legumes in the cropping system, and the use of crop residue help to reduce runoff and control erosion.

This soil is suited to trees, and potential productivity is moderately high. The main species are water-tolerant oaks, yellow-poplar, and sweetgum.

This soil is limited for many urban uses by the seasonal high water table. The water table and a frost-action potential are limitations of the soil as a site for houses with basements, septic tank absorption fields, and local roads and streets.

Capability subclass: IIw.



**ESA—Ellington Variant-Urban land complex, 0 to 5 percent slopes.** This unit mainly consists of nearly level to gently sloping, moderately well drained soils and areas that are used for urban development. The unit is on glacial outwash terraces principally in South Plainfield,

Dunellen, Piscataway, and Edison Townships. Slopes are smooth and range in length from 100 to 900 feet. The areas are irregular in shape and range from 20 to 400 acres. The soils and urbanized areas are in such an intricate pattern that it was not practical to map them separately.

About 40 percent of this unit is areas of Ellington Variant soils. Typically, they have a surface layer of dark brown sandy loam about 4 inches thick. The subsurface layer is strong brown sandy loam 16 inches thick. The subsoil is yellowish red fine sandy loam 16 inches thick. Red shale bedrock is at a depth of 36 inches.

About 40 percent of this unit is urbanized areas covered mainly by concrete, asphalt, buildings, or other impervious surfaces.

Included with this unit in mapping are small areas of soils that are less than 20 inches deep to red shale bedrock; soils that contain strata of fine gravel or silt loam; and areas that have been covered by more than 20 inches of fill material, commonly from adjacent areas of Ellington Variant or Dunellen soils that have been cut or graded. Together, they make up as much as 15 percent of the unit. Also included are small areas of Reaville, Klinesville, Rowland, and Parsippany Variant soils. They make up as much as 5 percent of the unit. The Rowland soils require protection from flooding, and the Parsippany Variant soils require drainage. The Klinesville and Reaville soils and the soils that are less than 20 inches deep to shale bedrock are on slight knolls throughout the unit or on edges of the unit. The Rowland and Parsippany Variant soils are in drainageways throughout the unit. The Ellington soils are throughout the unit.

The permeability in undisturbed areas of this unit is moderate to moderately rapid. Runoff is medium, and the hazard of erosion is moderate. The available water capacity is moderate. Most unlimed areas are very strongly acid.

The undisturbed areas of soils in this unit are mainly around and between structures. Those areas range from 500 to 7,000 square feet. The soils and fill material in those areas are generally suitable for lawns, shade trees, ornamental trees, shrubs and vines, and vegetable gardens. The areas that have been disturbed generally are sandy and droughty and have poor suitability for plants, trees, and grasses.

Capability subclass: not assigned.

**EvB—Evesboro sand, 0 to 5 percent slopes.** This soil is nearly level or gently sloping and is excessively drained. It is on stream terraces in low positions principally in East Brunswick, Monroe, and Old Bridge Townships. Slopes are convex and are about 40 to 500 feet long. The areas of this soil range mainly from 4 to 150 acres.

Typically, the surface layer of this soil is dark grayish brown sand 3 inches thick. The subsoil is strong brown

sand 37 inches thick. The substratum is reddish yellow sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of Klej, Downer, Lakewood, and Lakehurst soils. These inclusions generally require the same management as this Evesboro soil, and they make up as much as 25 percent of the unit. Also included are small areas of soils with underlying clay beds and frequently flooded Humaquepts. They make up as much as 10 percent of the unit. The soils with underlying clay beds need drainage, and the Humaquepts require protection from flooding. The Klej soils and Humaquepts are in draws and drainageways on the edge of the mapped areas. The Lakehurst and Lakewood soils are on the edges of the mapped areas, mainly on the northwest-facing slopes. The soils with underlying clay beds are at high elevations about midway between the South River and Browntown. The Downer inclusions are on a few slight knolls throughout the unit.

The permeability of this Evesboro soil is rapid in the subsoil and substratum. Available water capacity is low. Organic matter content and natural fertility are low. Tilth is good, and the soil is easily worked. The root zone extends to a depth of 60 inches or more. Runoff is slow. In unlimed areas the surface layer and subsoil commonly are very strongly acid.

This soil is poorly suited to cultivated crops and to hay and pasture, mainly because of the available water capacity. Fertilizers leach rapidly. Wind erosion is a hazard in unprotected areas but can be reduced by the use of cover crops or windbreaks.

This soil is suited to woodland, and most of the acreage is wooded. Potential productivity is moderately high. The common trees are shortleaf pine, Virginia pine, pitch pine, and black, white, and chestnut oaks. Most areas are cut for pulpwood. Protection from fire is the major management concern.

The sand in the surface layer, the permeability, and the available water capacity are the main limitations of the soil for community development. They especially limit the soil as site for sanitary landfills, septic tank absorption fields, lawns and shrubs, picnic areas, camping, and athletic fields.

Capability subclass: VIIc.

**EvC—Evesboro sand, 5 to 10 percent slopes.** This soil is sloping and excessively drained. It is on side slopes and toe slopes principally in East Brunswick, Monroe, and Old Bridge Townships. Slopes are concave and convex. The areas of this soil range mainly from 4 to 150 acres.

Typically, the surface layer is dark grayish brown sand about 3 inches thick. The subsoil is strong brown sand 37 inches thick. The substratum is reddish yellow sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of Klej, Downer, Lakewood, and Lakehurst soils and soils

and terraces, principally in East Brunswick, Old Bridge, and Sayreville Townships. Slopes are smooth or convex. The areas are irregular in shape and range from 5 to 100 acres.

Typically, the surface layer is a brown loamy sand about 6 inches thick. The subsoil is 34 inches thick. It is mostly yellowish brown loamy sand that is mottled in the lower part. The substratum extends to a depth of 60 inches or more. It is gray to grayish brown loamy sand to a depth of 48 inches and dark gray clay at a depth of more than 48 inches.

Included with this soil in mapping are small areas of soils with slopes of more than 3 percent, soils with a surface layer of white sand or sandy loam, and soils in which the clay layer is deeper or shallower than in this Klej soil. Together, they make up about 25 percent of the unit, and they generally require the same management as this Klej soil. Also included are small areas of Keyport soils that make up about 5 percent of the unit. These Keyport soils are in slight depressions and are more poorly drained than this Klej soil. The other inclusions are throughout the unit.

The permeability of this Klej soil is rapid in the upper parts, but it is slow to very slow in the clayey part of the substratum. Available water capacity and organic matter content are low. The root zone extends to a depth of 60 inches but is seasonally restricted by wetness at a depth of 36 inches. This soil is subject to frost heaving. The clayey part of the substratum has a moderate shrink-swell potential. A seasonal high water table is perched at a depth of 1.5 to 4 feet from late fall to late spring and during wet periods. Runoff is medium, and the erosion hazard is moderate. In unlimed areas the surface layer is extremely acid and the subsoil is very strongly acid.

This soil has fair suitability for cultivated crops. Early-spring vegetables are the common crop. Crops suffer from wetness during periods of heavy rainfall and from drought during dry periods. The soil can be worked early if drained. It is easy to maintain good tilth. If this soil is cultivated, drainage, cover crops, and windbreaks help to promote good root growth, control erosion, and prevent blowing of the soil. Frequent applications of lime and fertilizer are needed for optimum production.

The soil is suited to trees, and potential productivity is moderately high. The soil is suited to a fairly wide variety of trees, including yellow-poplar, upland oaks, sweetgum, beech, and red maple. Seasonal wetness limits the use of timber equipment during winter and spring.

The seasonal high water table, the low available water capacity, and the slow permeability in the substratum are the main limitations of the soil for community development. The water table and the permeability especially limit the soil as a site for septic systems. Wetness in the substratum is a limitation of the soil as a site for house foundations and roads and streets.

Capability subclass: IIIw.

**KUA—Klej clayey substratum-Urban land complex, 0 to 5 percent slopes.** This unit mainly consists of nearly level, moderately well drained and somewhat poorly drained soils and areas that are used for urban development. The unit is on divides, terraces, and side slopes, principally in East Brunswick and Old Bridge Townships. Slopes are smooth. The areas are irregular in shape and range from 20 to 400 acres. The soils and urbanized areas are in such an intricate pattern that it was not practical to map them separately.

About 40 percent of this unit is Klej soils. Typically, they have a surface layer of very dark gray loamy sand about 6 inches thick. The subsoil is 34 inches thick. It is mostly yellowish brown loamy sand that is mottled in the lower part. The substratum extends to a depth of 60 inches or more. To a depth of 48 inches it is olive yellow, olive brown, and light gray sand. At a depth of more than 48 inches it is very dark gray clay.

About 40 percent of this unit is areas covered mainly by concrete, asphalt, buildings, or other impervious surfaces.

Included with this unit in mapping are small areas of soils with slopes of more than 5 percent; soils with a surface layer of white sand or sandy loam; soils in which the clayey part of the substratum is at a depth of more or less than 48 inches; areas of soils that have been covered by more than 20 inches of fill material, commonly from adjacent areas of Downer soils that have been cut or graded; and areas where most or all of the original soil has been removed. Together, they make up about 15 percent of the unit. Also included are small areas of Keyport soils that make up about 5 percent of the unit. They are not so well drained as these Klej soils. The Keyport soils are in slight depressions. The remaining inclusions are throughout the mapped areas.

The permeability in this unit is rapid above the clayey part of the substratum and slow to very slow in the clayey part. A seasonal high water table is perched in the subsoil from late fall to late spring. Runoff is medium, and the hazard of erosion is moderate. Available water capacity is low. Most unlimed areas are very strongly acid.

The undisturbed areas of this unit are mainly in yards and between and around structures. Those areas range from about 500 to 7,000 square feet. The seasonal high water table is the main limitation of the soil as a building site. The water table and droughtiness in summer make the soil poorly suited to lawns, shade trees, shrubs and vines, and vegetable gardens. The areas that have been excavated generally are very sandy and droughty.

Capability subclass: VIIs.



**KvB—Klinesville shaly loam, 0 to 5 percent slopes.** This soil is gently sloping and well drained. It is on ridges, divides, side slopes, and toe slopes, principally in South Brunswick, Piscataway, and Edison Townships.



Slopes are smooth or convex. The areas are irregular in shape and range from 5 to 100 acres.

Typically, the surface layer is dark brown shaly loam about 8 inches thick. The subsoil mostly is dark reddish brown shaly silt loam 4 inches thick. Dark reddish brown shale bedrock is at a depth of 12 inches.

Included with this soil in mapping are small areas of Penn soils and soils with a surface layer of silt loam or loam. They make up as much as 25 percent of the unit and generally require the same management as this Klinesville soil. Also included are small areas of Reaville silt loam that make up as much as 5 percent of the unit. They are not so well drained as this Klinesville soil. The Reaville soil is commonly in drainageways. The other soils are throughout the unit.

The permeability of this Klinesville soil is moderately rapid, and available water capacity is low. This soil is subject to frost heaving. Runoff is slow. The hazard of erosion is slight. Organic matter content is moderate. The rooting depth is restricted by the shale bedrock. In unlimed areas the surface layer and the subsoil are very strongly acid.

This soil is poorly suited to cultivated crops such as corn, soybeans, small grains, and hay. Where the shale content of the surface layer is high, seedbed preparation and cultivation are difficult. Maintaining the organic matter content helps to reduce runoff and erosion. Green-manure crops, cover crops, conservation tillage, and grasses and legumes help to maintain tilth and reduce erosion. Periodic applications of lime and fertilizer are needed for optimum production.

Proper stocking rates, rotation and deferred grazing, and restricted grazing are the chief pasture management needs. Periodic applications of lime and fertilizers are needed for optimum production.

Because of the low available water capacity, this soil is not well suited to woodland. Potential productivity is moderate. Rooting is restricted by the shallow depth to bedrock. Seedling mortality is high because of the shallowness to bedrock and the low available water capacity. The common trees are northern red oak, white oak, and chestnut oak.

This soil is limited for many urban uses because of the depth to bedrock and the content of rock fragments. The bedrock is a major limitation of the soil as a site for septic tank absorption fields, dwellings with basements, and lawns and landscaping. The rock fragment content and depth to bedrock are limitations for most recreation uses.

Capability subclass: IIIe.

**KvD—Klinesville shaly loam, 5 to 15 percent slopes.** This soil is sloping to moderately steep and is well drained. It is on ridges, divides, side slopes, and toe slopes, principally in Edison, Piscataway, and North Brunswick Townships. The areas are irregular in shape and range from 50 to 100 acres.

Typically, the surface layer is dark brown shaly loam about 8 inches thick. The subsoil mostly is dark reddish brown shaly silt loam 4 inches thick. Dark reddish brown shale bedrock is at a depth of 12 inches.

Included with the soil in mapping are small areas of soils with a surface layer of loam, spots where the shale bedrock is at a depth of less than 12 inches, and small areas where the slope is more than 15 percent. Together, they make up as much as 25 percent of the unit, and they generally are managed the same as this Klinesville soil. Also included are small areas of Nixon and Nixon Variant soils. They make up as much as 5 percent of the unit and are deeper to bedrock than this Klinesville soil.

The permeability of this Klinesville soil is moderately rapid, and available water capacity is low. This soil is subject to frost heaving. Runoff is medium. The hazard of erosion is moderate. Organic matter content is moderate. The rooting depth is restricted by the shale bedrock. In unlimed areas the surface layer and the subsoil are very strongly acid.

This soil is poorly suited to cultivated crops such as corn, soybeans, small grains, and hay. Where the shale content of the surface layer is high, seedbed preparation and cultivation are difficult. Maintaining the organic matter content helps to reduce runoff and erosion. Green-manure crops, cover crops, conservation tillage, and grasses and legumes help to maintain tilth and reduce erosion. Periodic applications of lime and fertilizer are needed for optimum production.

Prevention of overgrazing and grazing when the soil is wet is a major concern of pasture management. Proper stocking rates, rotation and deferred grazing, and restricted grazing are the chief management needs. For optimum production, the level of fertility must be maintained by periodic applications of fertilizer.

Because of the low available water capacity, this soil is not well suited to woodland. Potential productivity is moderate. Rooting is restricted by the shallow depth to bedrock. Seedling mortality is high because of the shallowness to bedrock and the low available water capacity. The common trees are northern red oak, white oak, and chestnut oak.

Slope, the low available water capacity, the depth to bedrock, and rock fragments in the soil limit the soil for most urban uses. The depth to bedrock limits the soil as a site for septic tank absorption fields, dwellings with basements, and lawns and landscaping. The rock fragments and the depth to bedrock are major limitations for most recreation uses.

Capability subclass: IVe.

**KvE—Klinesville shaly loam, 15 to 25 percent slopes.** This soil is moderately steep to steep and is well drained. It is on side slopes principally in East Brunswick, Piscataway, Edison, and New Brunswick Townships. Slopes are smooth or convex and range in height mainly

11C2—40 to 60 inches, reddish brown (5YR 4/3) stratified sandy loam, gravelly sandy loam, and loam; massive; very friable; firm; strongly acid.

The solum thickness ranges from 18 to 30 inches.

Coarse fragments make up 0 to 25 percent of the solum and 0 to 35 percent of the C horizon. Reaction in unlimed areas ranges from extremely acid to strongly acid.

The A horizon has hue of 7.5YR, value of 2 to 4, and chroma of 2 or 4.

The B horizon has hue of 5YR to 7.5YR, value of 4 or 5, and chroma of 3 to 8. It ranges from loam to sandy loam. It has a subangular blocky structure or platy structure or is massive.

The C horizon has hue of 5YR or 7.5YR, value of 4 or 5, and chroma of 3 to 8. It is stratified fine sand, sandy loam, gravelly loamy sand, or gravelly sand.

### Elkton Series

The Elkton series consists of deep, poorly drained soils. They formed in acid, moderately fine textured Coastal Plain sediments. The Elkton soils are on broad, low-lying flats, basins, and drainageways. Slope ranges from 0 to 2 percent.

Elkton soils are on the landscape with Keyport, Woodstown, and Manahawkin soils and Humaquepts. The Elkton soils contain more clay than the Woodstown or Manahawkin soils or Humaquepts and do not have the high organic content common to the Manahawkin soils. The Elkton soils have a gray Bt horizon; the Bt horizon in the Keyport soils is brownish.

Typical pedon of Elkton loam, 0 to 2 percent slopes, 200 feet north of Texas Road, 1,800 feet east of Englishtown Road, in Old Bridge Township:

Ap—0 to 8 inches, grayish brown (10YR 5/2) loam; common fine distinct dark yellowish brown (10YR 4/4) mottles; moderate fine granular structure; friable; common fine roots; very strongly acid; abrupt smooth boundary.

B2tg—8 to 35 inches, gray (10YR 5/1) clay loam; common to many fine distinct yellowish brown (10YR 5/6) mottles; strong medium subangular blocky or blocky structure; firm; few fine roots; continuous moderately thick clay films; very strongly acid; clear wavy boundary.

C—35 to 60 inches, gray (10YR 5/1) clay loam; common to many fine distinct yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/4) mottles; massive; firm; few roots; very strongly acid.

The solum thickness ranges from 30 to 40 inches. The content of rounded quartzose pebbles ranges from 0 to 5 percent. The reaction in unlimed areas ranges from strongly to extremely acid.

The Ap horizon has hue of 10YR, value of 4 to 6, and chroma of 1 or 2.

The B horizon has hue of 10YR, value of 4 to 6, and chroma of 1. It ranges from silty clay to clay.

The C horizon has hue of 10YR or 2.5YR, value of 4 to 6, and chroma of 1 or 2. In most places it is clay loam, silty clay, or clay. In some pedons, a sandy 11C horizon is at a depth of more than 40 inches.

### ★ Ellington Variant

The Ellington Variant consists of moderately deep to shale, moderately well drained soils. They formed in acid, moderately coarse textured glacial outwash material. The Ellington Variant soils are on the glacial outwash terraces near Ambrose Brook and Bound Brook. Slope ranges from 0 to 5 percent.

Ellington soils are on the landscape with Dunellen, Dunellen Variant, Reaville, and Parsippany soils. The depth to red shale bedrock is 20 to 40 inches in the Ellington Variant soils and more than 40 inches in the Dunellen and Dunellen Variant soils. The Ellington Variant soils have less clay in the subsoil than the Reaville soils and do not have the gray surface layer or the fine texture typical of the Parsippany soils.

Typical pedon of Ellington Variant sandy loam, 0 to 2 percent slopes, 20 feet south of Grandview Avenue, 0.1 mile north of North Randolphville Road, in Piscataway Township.

A1—0 to 4 inches, dark brown (7.5YR 3/2) sandy loam; moderate medium and coarse granular structure; very friable; common medium roots; strongly acid; abrupt smooth boundary.

A2—4 to 20 inches, strong brown (7.5YR 5/6) sandy loam; weak moderate granular structure; very friable; common fine roots; strongly acid; gradual wavy boundary.

B—20 to 36 inches, yellowish red (5YR 4/6) sandy loam; many coarse faint reddish brown (5YR 5/4) mottles; massive; firm; few fine roots; strongly acid; abrupt smooth boundary.

R—36 inches, dark reddish brown (2.5YR 3/4) shale; many distinct pinkish gray (5YR 6/2) mottles on the surface of the rock.

The solum thickness ranges from 20 to 40 inches. The content of coarse fragments above the shale bedrock ranges from 0 to 35 percent. The reaction in unlimed areas ranges from extremely acid to strongly acid.

The A1 horizon has hue of 10YR or 7.5YR, value of 2 or 3, and chroma of 2 or 3. The A2 horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 6.

The B horizon has hue of 5YR, value of 4 or 5, and chroma of 3 to 6. It has weak, medium to coarse, subangular blocky structure, or it is massive.

The solum thickness ranges from 40 to 60 inches. The content of rounded coarse quartzose pebbles ranges from 0 to 2 percent. Reaction in unlimed areas ranges from very strongly acid to extremely acid.

The Ap horizon has hue of 10YR, value of 4 or 5, and chroma of 2 or 3. It is silt loam, sandy loam, or loam.

The B horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 to 6. It has subangular blocky or blocky structure. Consistence is firm or very firm. The B horizon is silty clay loam, clay loam, and clay.

The C horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 to 4.

### Klej Series

The Klej series consists of deep, moderately well drained or somewhat poorly drained soils. They formed in acid, coarse-textured Coastal Plain sediments. The Klej soils are on terraces and toe slopes. Slope ranges from 0 to 5 percent but is dominantly less than 1 percent.

Klej soils are on the landscape with Evesboro, Hammonton, and Atsion soils. The Klej soils are mottled in the subsoil, and the Evesboro soils are not. The Klej soils contain less clay than the Hammonton soils and are not so gray in the subsoil as the Atsion soils.

Typical pedon of Klej loamy sand, 0 to 3 percent slopes, in a field in Helmetta, 50 feet north of Main Street and 50 feet east of 13th Street:

O—1 inch to 0, very dark brown (10YR 2/2) decayed leaf litter; many fine roots; abrupt smooth boundary.

Ap—0 to 6 inches, very dark grayish brown (10YR 3/2) loamy sand; weak medium subangular blocky structure; very friable; many fine roots; very strongly acid; abrupt smooth boundary.

B2—6 to 27 inches, yellowish brown (10YR 5/6) loamy sand; common medium distinct strong brown (7.5YR 5/8), yellowish brown (10YR 5/4), and light gray (10YR 7/2) mottles; weak medium subangular blocky structure; very friable; few fine roots; very strongly acid; clear gradual boundary.

B3—27 to 40 inches, yellowish brown (10YR 5/6) loamy sand; common medium distinct strong brown (7.5YR 5/8) and yellowish brown (10YR 5/4) mottles; single grain; loose; many common roots; very strongly acid; clear gradual boundary.

C—40 to 60 inches, yellowish brown (10YR 5/6) loamy sand; common large distinct light yellowish brown (10YR 6/4) and yellowish brown (10YR 5/8) mottles; single grain; loose; few fine roots; very strongly acid.

The solum thickness ranges from 25 to 50 inches. Rounded quartzose pebbles make up 0 to 5 percent of the solum and 0 to 15 percent of the C horizon.

The A horizon has hue of 10YR, value of 2 or 3, and chroma of 1 to 3.

The B horizon has hue of 10YR, value of 5, and chroma of 3 to 6. It mainly is loamy sand or sand. In some pedons the B horizon has strata of fine gravel.

The C horizon has hue of 2.5Y or 10YR, value of 5 or 6, and chroma of 4 to 8. It is sand or loamy sand above a depth of 40 inches and ranges mainly from sand to clay below a depth of 40 inches. In some pedons thin strata of gravelly sand are below a depth of 40 inches.

### ★ Klinesville Series

The Klinesville series consists of shallow, well drained soils. They formed in acid fractured shale bedrock. The Klinesville soils are on divides and side slopes. Slope ranges from 0 to 25 percent.

Klinesville soils are on the landscape with Reaville, Reaville Variant, Penn, Dunellen, and Ellington soils. The Klinesville soils are better drained than the Ellington, Reaville, or Reaville Variant soils and are shallower to bedrock than the Penn or Dunellen soils.

Typical pedon of Klinesville shaly loam, 0 to 5 percent slopes, in a field 50 feet south of Britt Road and 200 feet west of Metlar's Lane, on the campus of Rutgers University in Piscataway Township:

Ap—0 to 8 inches, dark reddish brown (5YR 3/4) shaly loam; moderate fine granular structure; friable; many fine and medium roots; 20 percent shale fragments; very strongly acid; abrupt smooth boundary.

B—8 to 12 inches, dark reddish brown (2.5YR 3/4) shaly silt loam; weak fine and medium subangular blocky structure; friable; many fine roots; 45 percent shale fragments; very strongly acid; gradual irregular boundary.

R—12 inches, dark reddish brown (2.5YR 3/4) weathered fractured bedrock.

The solum thickness and depth to bedrock range from 10 to 20 inches. Coarse fragments make up 15 to 50 percent of the solum and 50 to 75 percent of the C horizon. Reaction ranges from medium acid to very strongly acid.

The Ap horizon has hue of 5YR or 2.5YR, value of 3, and chroma of 3 or 4.

The B horizon has hue of 5YR or 2.5YR, value of 3, and chroma of 3 or 4.

Some pedons have a C horizon that is loosely bedded and partially weathered red shale. It contains cracks that are filled with weathered soil and alluvial clay.

The R horizon has hue of 5YR or 2.5YR, value of 3 to 5, and chroma of 3 to 6. It is jointed red shale and bedrock and is firm in place.

### Lakehurst Series

The Lakehurst series consists of deep, moderately well drained or somewhat poorly drained soils that

TABLE 15.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Wind erodi- bility group	Organic matter
								K	T		
	In	Pct	G/cc	In/hr	In/in	pH					Pct
★ KvB, KvD, KvE--- Klinesville	0-8	10-25	1.20-1.40	2.0-6.0	0.08-0.12	4.5-6.0	Low-----	0.20	2	---	.5-2
	8-12	10-20	1.40-1.60	2.0-6.0	0.06-0.10	4.5-6.0	Low-----	0.20			
	12-16	---	---	---	---	---	-----				
KWB*: Klinesville-----	0-8	10-25	1.20-1.40	2.0-6.0	0.08-0.12	4.5-6.0	Low-----	0.20	2	---	.5-2
	8-12	10-20	1.40-1.60	2.0-6.0	0.06-0.10	4.5-6.0	Low-----	0.20			
	12-16	---	---	---	---	---	-----				
Urban land.											
LaA----- Lakehurst	0-21	1-4	1.10-1.65	6.0-20	0.04-0.09	3.6-5.0	Low-----	0.17	5	1	---
	21-60	1-10	1.45-1.65	6.0-20	0.04-0.10	3.6-5.0	Low-----	0.17			
LeB----- Lakewood	0-20	1-4	1.25-1.50	6.0-20	0.04-0.09	3.6-5.0	Low-----	0.10	5	1	1-2
	20-60	1-10	1.10-1.60	6.0-20	0.04-0.10	3.6-5.0	Low-----	0.17			
	60-64	2-4	1.50-1.65	0.6-20	0.04-0.10	3.6-5.0	Low-----	0.10			
LnA, LnB----- Lansdowne	0-7	10-30	1.25-1.55	0.6-2.0	0.22-0.26	5.1-5.5	Low-----	0.43	3	---	1-3
	7-50	35-60	1.30-1.70	0.06-0.2	0.16-0.20	5.1-6.0	Moderate----	0.43			
	50-60	10-35	1.30-1.75	0.6-2.0	0.14-0.18	5.1-6.0	Low-----	0.28			
	60-64	---	---	---	---	---	-----				
LUA*: Lansdowne-----	0-7	10-30	1.25-1.55	0.6-2.0	0.22-0.26	5.1-5.5	Low-----	0.43	3	---	1-3
	7-50	35-60	1.30-1.70	0.06-0.2	0.16-0.20	5.1-6.0	Moderate----	0.43			
	50-60	10-35	1.30-1.75	0.6-2.0	0.14-0.18	5.1-6.0	Low-----	0.28			
	60-64	---	---	---	---	---	-----				
Urban land.											
LvA----- Lansdowne Variant	0-9	20-28	1.30-1.55	0.6-2.0	0.22-0.26	5.1-5.5	Low-----	0.43	3	---	1-2
	9-21	35-55	1.55-1.80	0.06-0.2	0.16-0.20	5.1-5.5	Moderate----	0.43			
	21-25	20-28	1.60-1.85	0.6-2.0	0.14-0.18	5.1-5.5	Low-----	0.43			
	25-29	---	---	---	---	---	-----				
Ma----- Manahawkin	0-30	---	0.30-0.65	6.0-20	0.30-0.35	3.6-5.5	-----	0.17	---	---	20-95
	30-60	0-10	1.10-1.70	2.0-20	0.04-0.08	4.5-5.0	Low-----	0.17			
MeA, MeB----- Matapeake	0-13	7-16	1.20-1.45	0.6-2.0	0.16-0.24	4.5-5.5	Low-----	0.37	4	---	2-4
	13-31	18-30	1.25-1.50	0.2-2.0	0.18-0.24	3.6-5.5	Low-----	0.43			
	31-60	8-15	1.30-1.60	0.6-6.0	0.08-0.18	3.6-5.5	Low-----	0.28			
MgA, MgB----- Mattapex	0-10	7-16	1.20-1.45	0.6-2.0	0.14-0.22	4.5-5.5	Low-----	0.37	4	---	.5-6
	10-40	18-30	1.25-1.50	0.2-2.0	0.18-0.22	3.6-5.5	Low-----	0.43			
	40-60	8-15	1.30-1.60	0.6-6.0	0.14-0.18	3.6-5.5	Low-----	0.28			
MoA, MoB----- Mount Lucas	0-6	10-20	1.20-1.30	0.6-2.0	0.18-0.22	5.1-6.5	Low-----	0.32	4	---	1-2
	6-30	17-32	1.30-1.60	0.06-0.6	0.12-0.16	5.1-7.3	Low-----	0.28			
	30-60	5-20	1.30-1.70	0.06-6.0	0.04-0.12	5.6-7.3	Low-----	0.28			
MsB----- Mount Lucas	0-6	10-20	1.20-1.30	0.6-2.0	0.16-0.22	5.1-6.5	Low-----	0.28	3	---	---
	6-30	17-32	1.30-1.60	0.06-0.6	0.12-0.16	5.1-7.3	Low-----	0.28			
	30-60	5-32	1.30-1.70	0.06-6.0	0.04-0.12	5.6-7.3	Low-----	0.28			
Mu----- Mullica	0-7	5-20	0.75-1.50	0.6-2.0	0.10-0.20	3.6-5.0	Low-----	0.28	3	---	2-7
	7-28	10-25	1.25-1.60	0.6-2.0	0.10-0.13	3.6-5.0	Low-----	0.24			
	28-60	5-25	1.30-1.65	0.6-20	0.02-0.10	3.6-5.0	Low-----	0.28			

See footnote at end of table.

TABLE 16.--SOIL AND WATER FEATURES

("Flooding" and "water table" and terms such as "rare," "brief," "apparent," and "perched" are explained in the text. The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Soil name and map symbol	Hydro-logic group	Flooding			High water table			Bedrock		Potential frost action
		Frequency	Duration	Months	Depth	Kind	Months	Depth	Hardness	
					<u>Ft</u>			<u>In</u>		
At----- Atsion	C/D	None-----	---	---	0-1.0	Apparent	Nov-Jun	>60	---	Moderate.
BoB, BoC, BoD----- Boonton	C	None-----	---	---	1.5-6.0	Perched	Nov-May	>60	---	Moderate.
BUB*: Boonton----- Urban land.	C	None-----	---	---	1.5-6.0	Perched	Nov-May	>60	---	Moderate.
ChA, ChB----- Chalfont	C	None-----	---	---	0.5-1.5	Perched	Nov-Mar	>40	Soft	High.
DnA, DnC, DoB----- Downer	B	None-----	---	---	>6.0	---	---	>60	---	Low.
DTB*, DTD*: Downer----- Urban land.	B	None-----	---	---	>6.0	---	---	>60	---	Low.
DUA*: Dunellen----- Urban land.	B	None-----	---	---	>6.0	---	---	>60	---	Moderate.
DvA, DvB----- Dunellen Variant	B	None-----	---	---	1.0-4.0	Apparent	Dec-Apr	>60	---	Moderate.
DWA*: Dunellen Variant----- Urban land.	B	None-----	---	---	1.0-4.0	Apparent	Dec-Apr	>60	---	Moderate.
Ek----- Elkton	C/D	Rare-----	---	---	0-1.0	Apparent	Jan-Apr	>60	---	High.
EoA, EoB----- Ellington Variant	B	None-----	---	---	1.0-3.0	Apparent	Nov-Apr	20-40	Soft	High.
☆ESA*: Ellington Variant----- Urban land.	B	None-----	---	---	1.0-3.0	Apparent	Nov-Apr	20-40	Soft	High.
EvB, EvC, EvD----- Evesboro	A	None-----	---	---	>6.0	---	---	>60	---	Low.
Fa, Fb----- Fallsington	B/D	None-----	---	---	0-1.0	Apparent	Dec-May	>60	---	High.
Fd----- Fallsington Variant	D	Rare-----	---	---	0-1.0	Perched	Dec-May	>60	---	High.

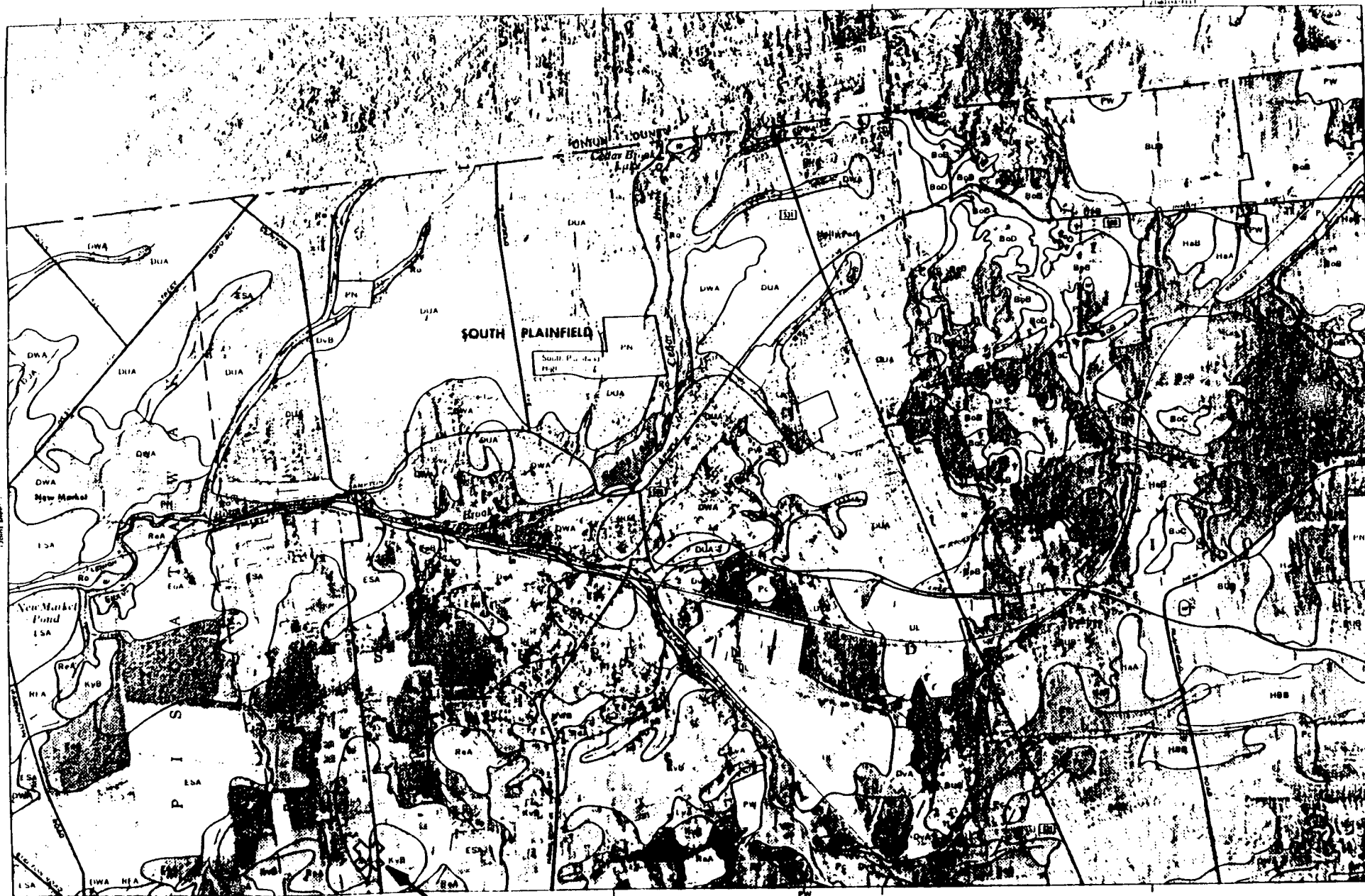
See footnote at end of table.

TABLE 16.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydro-logic group	Flooding			High water table			Bedrock		Potential frost action
		Frequency	Duration	Months	Depth	Kind	Months	Depth	Hardness	
					<u>Ft</u>			<u>In</u>		
FrB----- Fort Mott	A	None-----	---	---	>6.0	---	---	>60	---	Moderate.
HaA, HaB----- Haledon	C	None-----	---	---	0.5-1.5	Perched	Dec-May	>60	---	High.
HEB*: Haledon----- Urban land.	C	None-----	---	---	0.5-1.5	Perched	Dec-May	>60	---	High.
HcA----- Haledon Variant	C	None-----	---	---	0-1.0	Perched	Nov-Jun	>60	---	High.
HeA----- Hammonton	B	None-----	---	---	1.5-3.0	Apparent	Jan-Apr	>60	---	High.
HlA----- Hammonton	B	None-----	---	---	1.5-4.0	Perched	Dec-May	>60	---	High.
HmA----- Hammonton	B	None-----	---	---	1.5-3.0	Apparent	Jan-Apr	>60	---	High.
HoA----- Holmdel	C	None-----	---	---	0.5-4.0	Apparent	Dec-May	>60	---	High.
HU*. Humaquepts										
KeA, KeB, KeD, KfA, KfB, KfC, KfD----- Keyport	C	None-----	---	---	1.5-4.0	Perched	Nov-May	>60	---	High.
KGB*: Keyport----- Urban land.	C	None-----	---	---	1.5-4.0	Perched	Nov-May	>60	---	High.
KlA----- Klej	B	None-----	---	---	1.5-2.0	Apparent	Dec-Apr	>60	---	Moderate.
KmA----- Klej	B	None-----	---	---	1.5-2.0	Perched	Dec-Apr	>60	---	Moderate.
KUA*: Klej----- Urban land.	B	None-----	---	---	1.5-2.0	Perched	Dec-Apr	>60	---	Moderate.
☆ KvB, KvD, KvE----- Klinesville	C/D	None-----	---	---	>6.0	---	---	10-20	Soft	Moderate.
KWB*: Klinesville----- Urban land.	C/D	None-----	---	---	>6.0	---	---	10-20	Soft	Moderate.
LaA----- Lakehurst	A	None-----	---	---	1.5-3.5	Apparent	Jan-Apr	>60	---	Low.

See footnote at end of table.

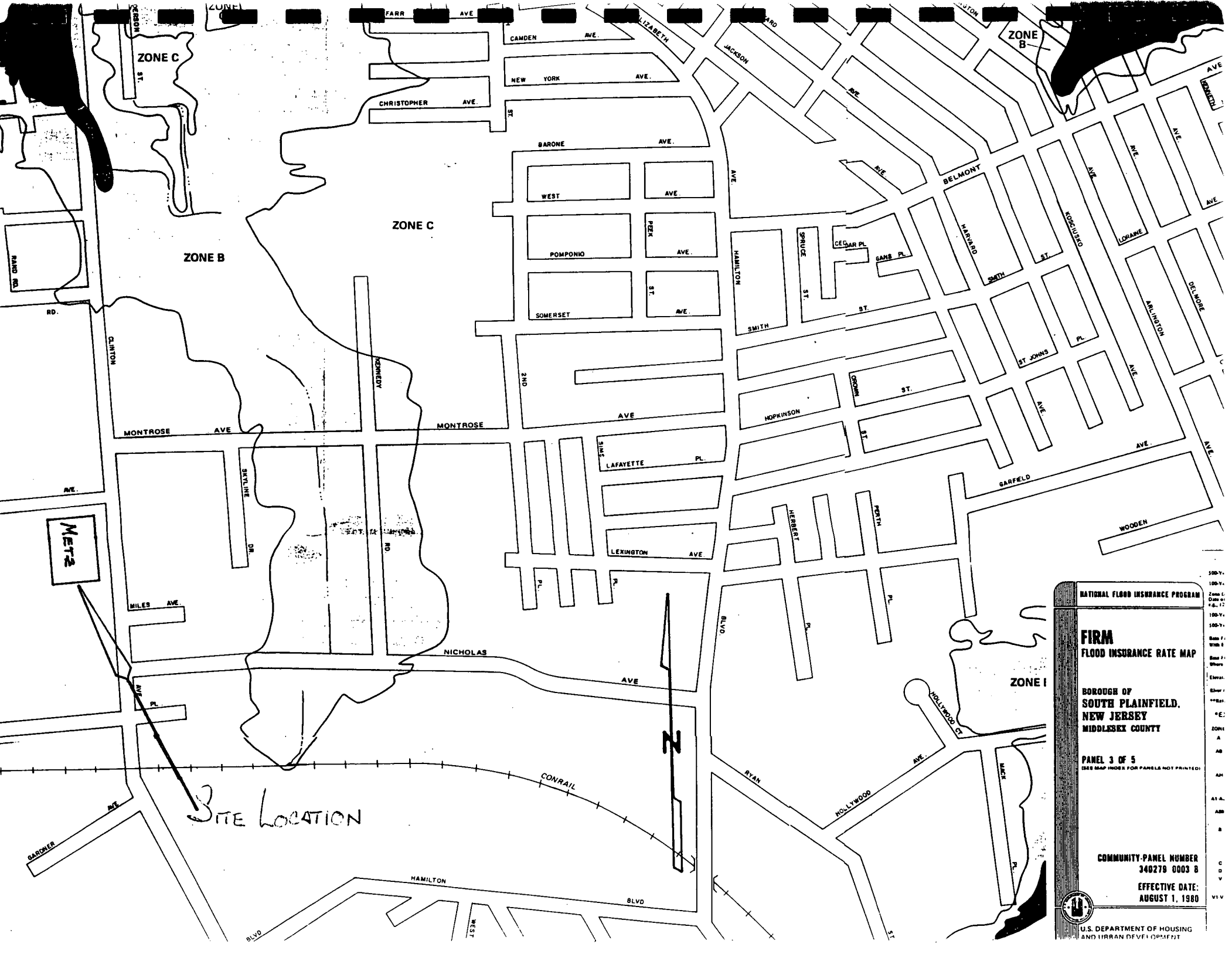
Scale 1 20000,



APPROXIMATE SITE LOCATION

REFERENCE 63





**NATIONAL FLOOD INSURANCE PROGRAM**

**FIRM  
FLOOD INSURANCE RATE MAP**

**BOROUGH OF  
SOUTH PLAINFIELD,  
NEW JERSEY  
MIDDLESEX COUNTY**

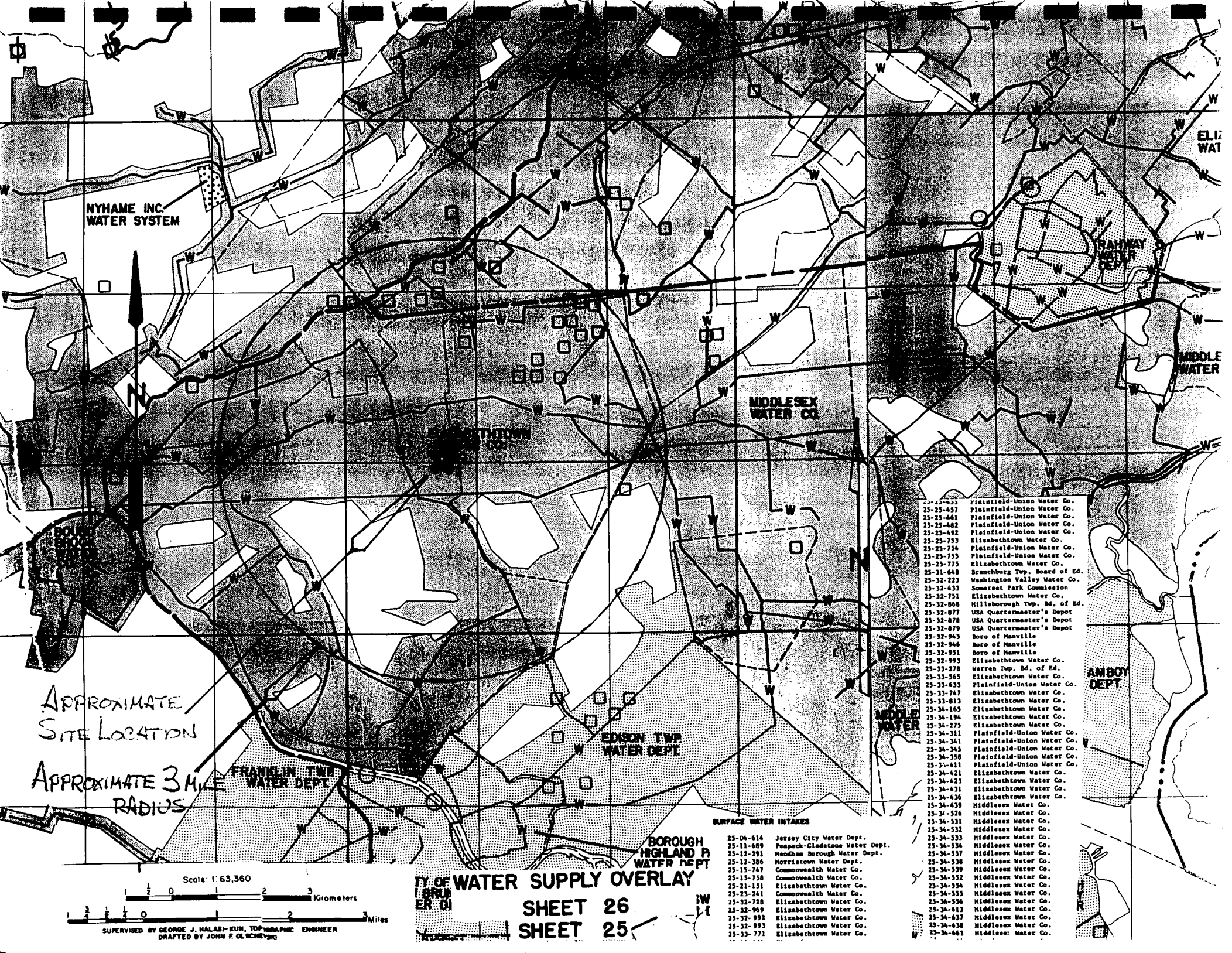
**PANEL 3 OF 5**  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

**COMMUNITY-PANEL NUMBER**  
340279 0003 8

**EFFECTIVE DATE:**  
AUGUST 1, 1980

**U.S. DEPARTMENT OF HOUSING  
AND URBAN DEVELOPMENT**

REFERENCE 64



NYHAME INC.  
WATER SYSTEM

MIDDLESEX  
WATER CO.

PLAINFIELD-UNION  
WATER CO.

MIDDLESEX  
WATER CO.

APPROXIMATE  
SITE LOCATION

APPROXIMATE 3 MILE  
RADIUS

FRANKLIN TWP.  
WATER DEPT.

EDISON TWP.  
WATER DEPT.

BOROUGH  
HIGHLAND PARK  
WATER DEPT.

AMBOY  
DEPT.

Scale: 1:63,360

0 1 2 3 Kilometers

0 1 2 3 Miles

SUPERVISED BY GEORGE J. MALABY-KUN, TOPOGRAPHIC ENGINEER  
DRAFTED BY JOHN F. OLSCHESKI

TOWN OF WATER SUPPLY OVERLAY

SHEET 26  
SHEET 25

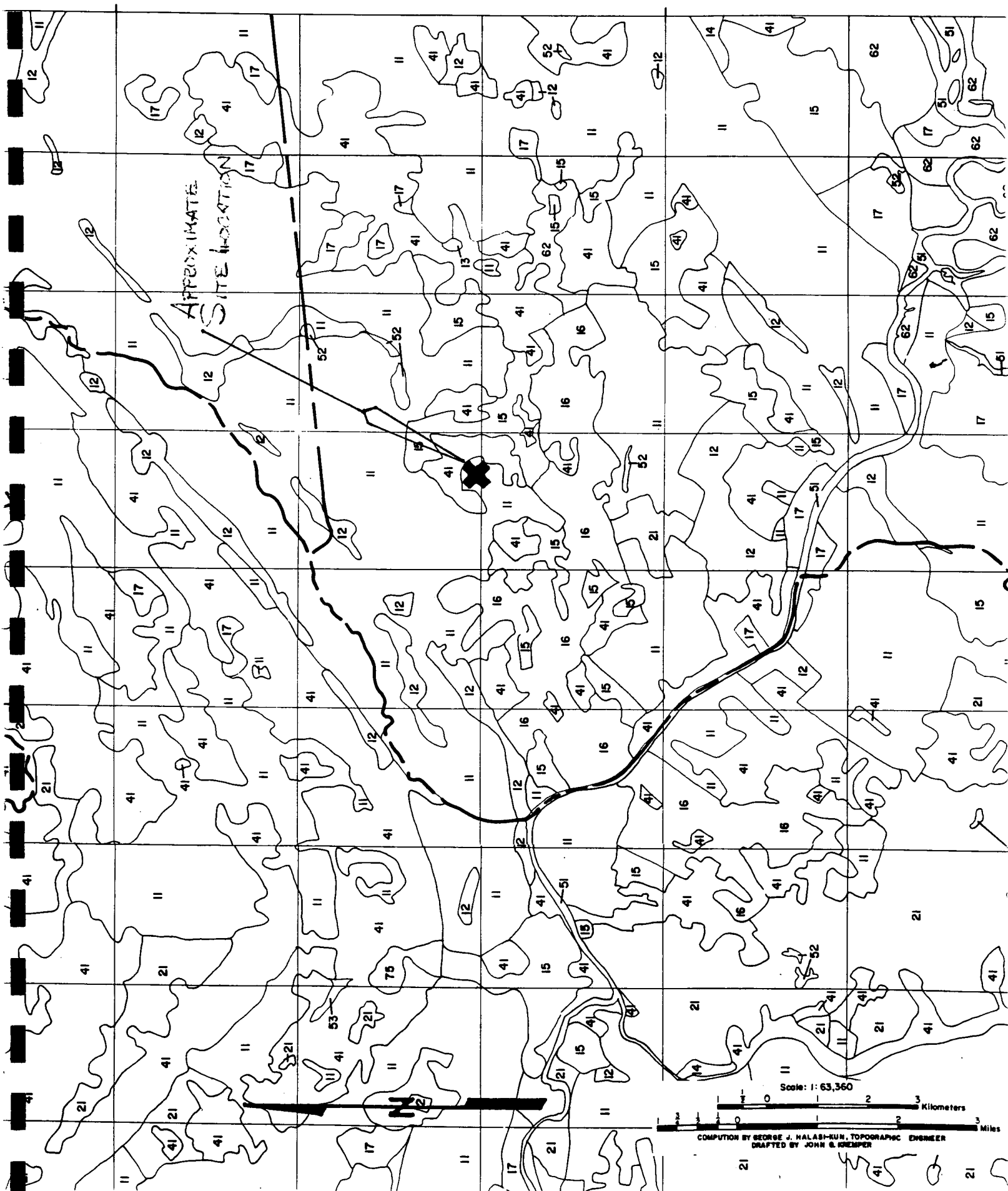
SURFACE WATER INTAKES

- |           |                               |
|-----------|-------------------------------|
| 25-04-614 | Jersey City Water Dept.       |
| 25-11-689 | Peapack-Gladstone Water Dept. |
| 25-12-291 | Hendham Borough Water Dept.   |
| 25-12-386 | Horriestown Water Dept.       |
| 25-15-747 | Commonwealth Water Co.        |
| 25-17-758 | Commonwealth Water Co.        |
| 25-21-151 | Elizabethtown Water Co.       |
| 25-23-241 | Commonwealth Water Co.        |
| 25-32-728 | Elizabethtown Water Co.       |
| 25-32-969 | Elizabethtown Water Co.       |
| 25-32-992 | Elizabethtown Water Co.       |
| 25-32-993 | Elizabethtown Water Co.       |
| 25-33-771 | Elizabethtown Water Co.       |

- |           |                              |
|-----------|------------------------------|
| 25-25-457 | Plainfield-Union Water Co.   |
| 25-25-461 | Plainfield-Union Water Co.   |
| 25-25-482 | Plainfield-Union Water Co.   |
| 25-25-483 | Plainfield-Union Water Co.   |
| 25-25-733 | Elizabethtown Water Co.      |
| 25-25-734 | Plainfield-Union Water Co.   |
| 25-25-735 | Plainfield-Union Water Co.   |
| 25-25-775 | Elizabethtown Water Co.      |
| 25-31-648 | Branchburg Twp. Bd. of Ed.   |
| 25-32-223 | Washington Valley Water Co.  |
| 25-32-613 | Somerset Park Commission     |
| 25-32-751 | Elizabethtown Water Co.      |
| 25-32-868 | Hillsborough Twp. Bd. of Ed. |
| 25-32-877 | USA Quartermaster's Depot    |
| 25-32-878 | USA Quartermaster's Depot    |
| 25-32-879 | USA Quartermaster's Depot    |
| 25-32-943 | Boro of Manville             |
| 25-32-946 | Boro of Manville             |
| 25-32-951 | Boro of Manville             |
| 25-32-993 | Elizabethtown Water Co.      |
| 25-33-278 | Warren Twp. Bd. of Ed.       |
| 25-33-565 | Elizabethtown Water Co.      |
| 25-33-633 | Plainfield-Union Water Co.   |
| 25-33-747 | Elizabethtown Water Co.      |
| 25-34-613 | Elizabethtown Water Co.      |
| 25-34-165 | Elizabethtown Water Co.      |
| 25-34-194 | Elizabethtown Water Co.      |
| 25-34-275 | Elizabethtown Water Co.      |
| 25-34-311 | Plainfield-Union Water Co.   |
| 25-34-341 | Plainfield-Union Water Co.   |
| 25-34-343 | Plainfield-Union Water Co.   |
| 25-34-358 | Plainfield-Union Water Co.   |
| 25-34-411 | Plainfield-Union Water Co.   |
| 25-34-421 | Elizabethtown Water Co.      |
| 25-34-423 | Elizabethtown Water Co.      |
| 25-34-431 | Elizabethtown Water Co.      |
| 25-34-436 | Elizabethtown Water Co.      |
| 25-34-439 | Hillsides Water Co.          |
| 25-34-476 | Hillsides Water Co.          |
| 25-34-531 | Hillsides Water Co.          |
| 25-34-532 | Hillsides Water Co.          |
| 25-34-533 | Hillsides Water Co.          |
| 25-34-534 | Hillsides Water Co.          |
| 25-34-537 | Hillsides Water Co.          |
| 25-34-538 | Hillsides Water Co.          |
| 25-34-539 | Hillsides Water Co.          |
| 25-34-542 | Hillsides Water Co.          |
| 25-34-554 | Hillsides Water Co.          |
| 25-34-555 | Hillsides Water Co.          |
| 25-34-556 | Hillsides Water Co.          |
| 25-34-613 | Hillsides Water Co.          |
| 25-34-637 | Hillsides Water Co.          |
| 25-34-638 | Hillsides Water Co.          |
| 25-34-641 | Hillsides Water Co.          |

REFERENCE 65

SHEET 25



REFERENCE 66

SEE FOLDER  
IN BACK OF REPORT

REFERENCE 67



FOR 3-MILE  
RADIUS MAP  
SEE FOLDER IN  
BACK OF REPORT

REFERENCE 68

CONTROL NO:

DATE:

11/14/85

TIME:

2:30

DISTRIBUTION:

L.R. METAL : FILE.

BETWEEN:

BOB STEWART

OF:

NJDEP FISH GAME &amp; WILDLIFE

PHONE:

(201) 236-2118

AND:

David GRUPP

(NUS)

DISCUSSION:

Type of Activities on Bound Brook.

Recreational - stock sunfish &amp; Bullheads.

Recently had several Fishing Derby's

ACTION ITEMS:

REFERENCE 69

Date: \_\_\_\_\_  
Company \_\_\_\_\_  
By: \_\_\_\_\_  
Date: \_\_\_\_\_  
Contractor \_\_\_\_\_  
By: \_\_\_\_\_  
Date: \_\_\_\_\_

(FR Doc. 84-1432 Filed 1-23-84; 8:43 am)

BILLING CODE 1500-60-MIA%

[OW-FRL-2460-3]

**Brunswick Shale and Sandstone  
Aquifer of the Ridgewood Area, New  
Jersey; Final Determination**

**AGENCY:** U.S. Environmental Protection  
Agency.

**ACTION:** Notice.

**SUMMARY:** Pursuant to Section 1424(e) of the Safe Drinking Water Act, the Administrator of the U.S. Environmental Protection Agency (EPA), has determined that the Brunswick Shale and Sandstone Aquifer, underlying the Ridgewood Area, is the sole or principal source of drinking water for Ridgewood, Midland Park, Glen Rock, and Wyckoff, New Jersey, and that the aquifer, if contaminated, would create a significant hazard to public health. As a result of this action, Federal financially assisted projects constructed in the Ridgewood Area and its streamflow source zone (upstream portions of Ho Ho Kus Brook and Saddle River Run drainage basins) will be subject to EPA review to ensure that these projects are designed and constructed so that they do not create a significant hazard to public health.

**ADDRESSES:** The data on which these findings are based are available to the public and may be inspected during normal business hours at the U.S. Environmental Protection Agency, Water Supply Branch, 26 Federal Plaza, New York, New York 10278.

**FOR FURTHER INFORMATION CONTACT:** Damina J. Duda, Water Supply Branch, 26 Federal Plaza, New York, New York 10278 (212) 264-1800.

**SUPPLEMENTARY INFORMATION:** Notice is hereby given that pursuant to Section 1424(e) of the Safe Drinking Water Act (42 U.S.C., 300f, 300h-3(e), Pub. L. 93-523), the Administrator of the U.S. Environmental Protection Agency (EPA) has determined that the Brunswick Shale and Sandstone aquifer of the Ridgewood Area is the sole or principal source of drinking water for Ridgewood, Midland Park, Glen Rock, and Wyckoff, New Jersey. Pursuant to Section 1424(e), Federal financially assisted projects constructed in the Ridgewood Area and its streamflow source zone (upstream portions of Ho Ho Kus Brook, and

Saddle River Run drainage basins) will be subject to EPA review.

## I. Background

Section 1424(e) of the Safe Drinking Water Act state:

(e) If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register. After the publication of any such notice, no commitment for Federal financial assistance (through a grant, contract loan guarantee, or otherwise) may be entered into for any project which the Administrator determines may contaminate such aquifer through a recharge zone so as to create a significant hazard to public health, but a commitment for Federal financial assistance may, if authorized under another provision of law, be entered into to plan or design the project to assure that it will not so contaminate the aquifer.

On July 4, 1979, the Committee to keep Our Water Pure petitioned EPA to designate the Brunswick Shale and Sandstone Aquifer of the Ridgewood Area as sole source aquifer. On January 15, 1980, EPA published a notice in the Federal Register announcing a public comment period and setting a public hearing date. A public hearing was conducted on February 28, 1980, and the public was allowed to submit comments on the petition until March 28, 1980.

## 11. Basis for Determination

Among the factors to be considered by the Administrator in connection with the designation of an under Section 1424(e) are: (1) Whether the aquifer is the area's sole or principal source of drinking water, and (2) whether contamination of the aquifer would create a significant hazard to public health.

On the basis of information available to this Agency, the Administrator has made the following findings, which are the basis for the determination noted above:

1. The Brunswick Shale and Sandstone Aquifer of the Ridgewood Area is the "sole source" of drinking water for the approximately 68,820 residents of Ridgewood, Midland Park, Glen Rock, and Wyckoff, New Jersey.

2. There is no existing alternative drinking water source or combination of sources which provides fifty percent or more of the drinking water to the designated area.

3. The Brunswick formation is a soft red shale interbedded with coarse grained sandstone. The aquifer is overlain by permeable unconsolidated glacial and recent deposits. As a result

of permeable soil characteristics, the Brunswick Shale and Sandstone Aquifer of the Ridgewood Area is highly susceptible to contamination through its recharge zone from a number of sources, including but not limited to, chemical spills, leachate from landfills, stormwater runoff, highway deicers, faulty septic systems, wastewater treatment systems, and waste disposal lagoons. The aquifer is also susceptible to contamination to a lesser degree from the same sources, through its streamflow source zone. Since ground water contamination can be difficult or impossible to reverse and since the aquifer in this area is solely relied upon for drinking water purposes by the population of the Ridgewood Area, contamination of the aquifer could pose a significant hazard to public health.

## III. Description of the Brunswick Shale and Sandstone Aquifer of the Ridgewood Area, Its Recharge Zone and Its Streamflow Source Zone

The Brunswick Shale and Sandstone Aquifer is a soft red shale interbedded with coarse grained sandstone. The formation, located in northern New Jersey, is fairly large, extending south into Pennsylvania and north into New York. Igneous intrusions which form the Watchung Mountains and the Palisades, also form the western and eastern boundaries of the Brunswick formation, respectively. The area in which Federal financially assisted projects will be subject to review is the portion of the Brunswick Shale and Sandstone Aquifer in the Ridgewood Area, its streamflow source zone, and its recharge zone.

For the purposes of this designation, the Brunswick Shale and Sandstone Aquifer of the Ridgewood Area is considered to include the entire municipalities of Ridgewood, Midland Park, Glen Rock, and Wyckoff, New Jersey. Its recharge zone is considered to be one and the same with this area. The streamflow source zone is that portion of the drainage basins of Ho Ho Kus Brook and Saddle River Run located upstream of the Ridgewood area. This includes all or a portion of the following New Jersey municipalities: Waldwick, Allendale, Ramsey, Mahwah, Franklin Lakes, Ho Ho Kus, Saddle River, Upper Saddle River, Woodcliff Lake, Hillside, Washington, Montvale, as well as Ramapo Township, New York.

## IV. Information Utilized in Determination

The information utilized in this determination includes the petition, written and verbal comments submitted by the public, and various technical publications. The above data is

available to the public and may be inspected during normal business hours at the U.S. Environmental Protection Agency, Region II, Water Supply Branch, 26 Federal Plaza, New York, New York 10278.

## V. Project Review

EPA Region II is working with the Federal agencies that may in the future provide financial assistance to projects in the area of concern. Interagency procedures have been developed through which EPA will be notified of proposed commitments by Federal agencies for projects which could contaminate the Brunswick Shale and Sandstone Aquifer, upon which the Ridgewood Area is dependent for its sole source water supply. EPA will evaluate such projects and, where necessary, conduct an in-depth review, including soliciting public comments where appropriate. Should the Administrator determine that a project may contaminate the aquifer through its recharge zone so as to create a significant hazard to public health, no commitment for Federal financial assistance may be entered into. However, a commitment for Federal financial assistance may, if authorized under another provision of law, be entered into to plan or design the project to assure that it will not so contaminate the aquifer.

Although the project review process cannot be delegated, the U.S. Environmental Protection Agency will rely to the maximum extent possible on any existing or future State and local control mechanisms in protecting the ground water quality of the Brunswick Shale and Sandstone Aquifer on which the Ridgewood Area is dependent for its sole source water supply. Included in the review of any Federal financially assisted project will be coordination with the State and local agencies. Their comments will be given full consideration and the Federal review process will attempt to complement and support State and local ground water protection mechanisms.

## VI. Summary and Discussion of Public Comments

Most comments were generally in favor of designation. Two local governments submitted resolutions in support of designation. Only two commenters expressed any reservations regarding the designation.

One commenter expressed concern that the proposed designation would provide protection which is duplicative of State and local controls and may lead to unnecessary bureaucratic delays of

projects. Although a number of ground water protection measures are available at the Federal, State and local level, none of these, either, individually or collectively, permit EPA to act as directly as would a sole source designation in the review and approval of Federal financially assisted projects. In addition, EPA feels that the sole source project review process will foster integration rather than duplication of environmental review efforts. Memoranda of Understanding have been negotiated with various Federal agencies, with the purpose of streamlining the review process and minimizing project delays.

One commenter expressed concern that the area proposed for sole source designation could be an arbitrary political subdivision of the larger Brunswick aquifer system. The commenter questioned whether sufficient consideration had been given to the physical limits of the hydrologic system. The EPA recognizes that the aquifer does indeed cover a large area. However, a significant portion of the population in these other areas utilize other sources of water supply or have alternative sources available.

Concern was also raised that the Ridgewood Area may have alternative water supply available through adjacent water purveyors; specifically, the Passaic Valley Water Commission or the Hackensack Water Company. EPA has reviewed this matter and determined that either insufficient supply is currently available (in one case) or interconnections between the Ridgewood Area and the purveyor are currently not adequate to handle the Area's demand. Furthermore, the Brunswick Shale and Sandstone Aquifer in the Ridgewood Area is a source of water for export to adjacent purveyors during drought conditions.

The area considered for designation was determined to meet the criteria of an area which depends upon an aquifer for its sole or principal drinking water source and which, if contaminated, would pose a serious threat to the health of the Ridgewood Area residents.

#### VII. Economic and Regulatory Impact

Pursuant to the provisions of the Regulatory Flexibility Act (RFA), 5 U.S.C. 605(b), I hereby certify that the attached rule will not have a significant impact on a substantial number of small entities. For purposes of this Certification the "small entity" shall have the same meaning as given in Section 601 of the RFA. This action is only applicable to the Ridgewood Area.

The only affected entities will be those Area-based businesses, organizations or governmental jurisdictions that request Federal financial assistance for projects which have the potential for contaminating the aquifer so as to create a significant hazard to public health. EPA does not expect to be reviewing small isolated commitments of financial assistance on an individual basis, unless a cumulative impact on the aquifer is anticipated; accordingly, the number of affected small entities will be minimal.

For those small entities which are subject to review, the impact to today's action will not be significant. Most projects subject to this review will be preceded by a ground water impact assessment required pursuant to other Federal laws, such as the National Environmental Policy Act, as amended (NEPA), 42 U.S.C. 4321, et seq. Integration of those related review procedures with sole source aquifer review will allow EPA and other Federal agencies to avoid delay or duplication of effort in approving financial assistance, thus minimizing any adverse effect on those small entities which are affected. Finally, today's action does not prevent grants of Federal financial assistance which may be available to any affected small entity in order to pay for the redesign of the project to assure protection of the aquifer.

Under Executive Order 12291, EPA must judge whether a regulation is "major" and therefore subject to the requirement of a Regulatory Impact Analysis. This regulation is not major because it will not have an annual effect of \$100 million or more on the economy, will not cause any major increase in costs or prices, and will not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of United States enterprises to compete in domestic or export markets. Today's action only affects the Brunswick Shale and Sandstone Aquifer of the Ridgewood Area. It provides an additional review of ground-water protection measures, incorporating State and local measures whenever possible, for only those projects which request Federal financial assistance.

Dated: January 12, 1983.

William D. Ruckelshaus,  
Administrator.

FR Doc. 84-1887 Filed 1-23-84; 8:43 am]  
BILLING CODE 6560-60-M

REFERENCE 70



DATE: 6/10/75

EXTRACT INFORMATION FROM WELLS IN THE GROUND WATER SITE INVENTORY  
DATA BASE, SORTED BY THE USGS UNIQUE ID NUMBER

USGS UNIQUE ID	SITE ID	TOWNSHIP	COUNTY	LOCAL IDENTIFIER	DATE COMPLETE	SITE /H2O USE	TOP OF OPENING	BOTTOM OPENING	WELL DEPTH	AQUIFER CODE
230326	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	1	19570115	W H	46.00	49.00	50.0	211FRNG
230327	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	1 HIGH SCHOOL	19591006	W T	29.00	39.00	39.0	211FRNG
230328	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	3185 1973	19730402	W H	86.00	96.00	96.0	2110DBG
230329	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	2	19550525	U U	215.00	248.00	248	211FRNG
230330	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	1	1936	W H	175.00	206.00	90.0	211FRNG
230331	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	3-1965	1965	W H			90.0	2110DBG
230332	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	1	19580627	W I	172.00	208.00	208	211FRNG
230333	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	2	19550618	Z L	45.00	49.00	49.0	211MRPA
230334	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	3 BRUNSWICK TWP		W H				
230335	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	334 CLINTON	19651029	W P	77.00	350.00	350	231BRCK
230336	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	31 PARK AVE	19641014	W P	110.00	500.00	500	231BRCK
230337	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	32 PARK AVE	1964	W F	97.00	500.00	500	231BRCK
230338	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	32 PARK AVE	1964	W P	109.00	500.00	500	231BRCK
230339	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	32 PARK AVE	196411	W F	88.00	501.00	501	231BRCK
230340	4021007411101	SOUTH BRUNSWICK TWP	SOUTH BRUNSWICK	32 PARK AVE	19640915	W P	97.83	500	500	231BRCK
230341	4021007411101	SAYREVILLE TWP	SAYREVILLE	QUIGLEY	1968	O L	26.00	29.00	29.0	112CPMY
230342	4021007411101	SAYREVILLE TWP	SAYREVILLE	TECH TAPE 3	19680126	O U	33.00	36.00	36.0	2110DBG
230343	4021007411101	SAYREVILLE TWP	SAYREVILLE	NO WATER POLICY	1968	O U	36.00	39.00	39.0	2110DBG
230344	4021007411101	SAYREVILLE TWP	SAYREVILLE	SUN BISCUIT 5	1957	O U	31.00	37.00	37.0	2110DBG
230345	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD 2	19651011	W P	63.00	83.00	83.0	2110DBG
230346	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD J	19650908	W F	71.00	81.00	81.0	2110DBG
230347	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD E	1963	T L	55.00	69.00	69.0	2110DBG
230348	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 1	19680729	O U	269.00	279.00	279	211FRNG
230349	4021007411101	SAYREVILLE TWP	SAYREVILLE	DES WELL 101	1968	O U	20.00	23.00	23.0	2110DBG
230350	4021007411101	SAYREVILLE TWP	SAYREVILLE	NAT LEAD 4	1968	O U	267.00	277.00	277	211FRNG
230351	4021007411101	SAYREVILLE TWP	SAYREVILLE	DES WELL 102	19680904	O L	76.00	82.00	82.0	2110DBG
230352	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD 1	19670712	W U	225.00	250.00	250	211FRNG
230353	4021007411101	SAYREVILLE TWP	SAYREVILLE	FECHARGE 1 M	19680919	O U	262.00	273.00	273	211FRNG
230354	4021007411101	SAYREVILLE TWP	SAYREVILLE	DES WELL 103	19681006	Z U	60.00	73.00	73.0	2110DBG
230355	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD C	19690121	W F	72.00	82.00	82.0	2110DBG
230356	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD A	19690221	W F	63.00	74.00	74.0	2110DBG
230357	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD F	1963	T U	70.00	80.00	80.0	2110DBG
230358	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 4	19651006	W P	70.00	80.00	80.0	2110DBG
230359	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD K	19680928	W P	64.00	75.00	75.0	2110DBG
230360	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD E	1963	T L	67.00	78.00	78.0	2110DBG
230361	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 2	1963	T L	67.00	82.00	82.0	2110DBG
230362	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD E	1963	W F	52.00	67.00	67.0	2110DBG
230363	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 3	19701117	W F	52.00	67.00	67.0	2110DBG
230364	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 4	19701117	W F	52.00	67.00	67.0	2110DBG
230365	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 5	19701117	W F	52.00	67.00	67.0	2110DBG
230366	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 6	19701117	W F	52.00	67.00	67.0	2110DBG
230367	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 7	19701117	W F	52.00	67.00	67.0	2110DBG
230368	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 8	19701117	W F	52.00	67.00	67.0	2110DBG
230369	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 9	19701117	W F	52.00	67.00	67.0	2110DBG
230370	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 10	19701117	W F	52.00	67.00	67.0	2110DBG
230371	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 11	19701117	W F	52.00	67.00	67.0	2110DBG
230372	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 12	19701117	W F	52.00	67.00	67.0	2110DBG
230373	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 13	19701117	W F	52.00	67.00	67.0	2110DBG
230374	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 14	19701117	W F	52.00	67.00	67.0	2110DBG
230375	4021007411101	SAYREVILLE TWP	SAYREVILLE	SWD TEST 15	19701117	W F	52.00	67.00	67.0	2110DBG

[illegible]

Hagstrom map of  
**Middlesex  
County**

Main Through Roads  
Proposed Highways  
Other Roads and Streets

N.J. Turnpike

Garden State Pkwy.

Entrance  
and Exit

127

U.S. State

Interstate

Highway Symbols

514 Statewide Secondary Highway System

Interchange Numbers

Passenger  
Freight  
Only

Railroad Lines and Stations

Parks  
Cemeteries  
Golf Courses

Airports

State and Federal Lands

Hospitals

Points of Interest

08901 Zip Code Numbers  
and Boundaries

State Boundaries

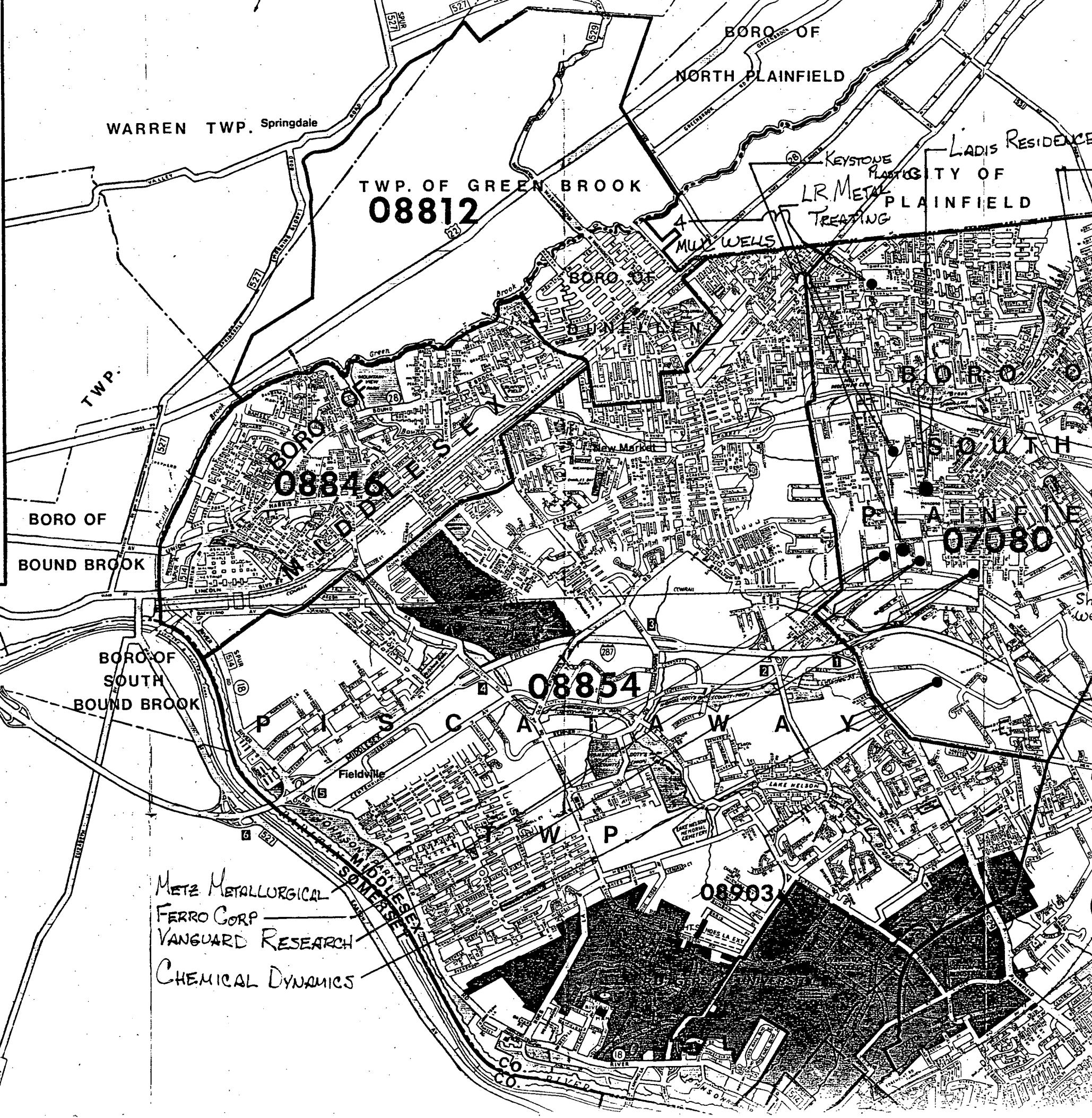
County Boundaries

Municipal Boundaries

Scales approx.

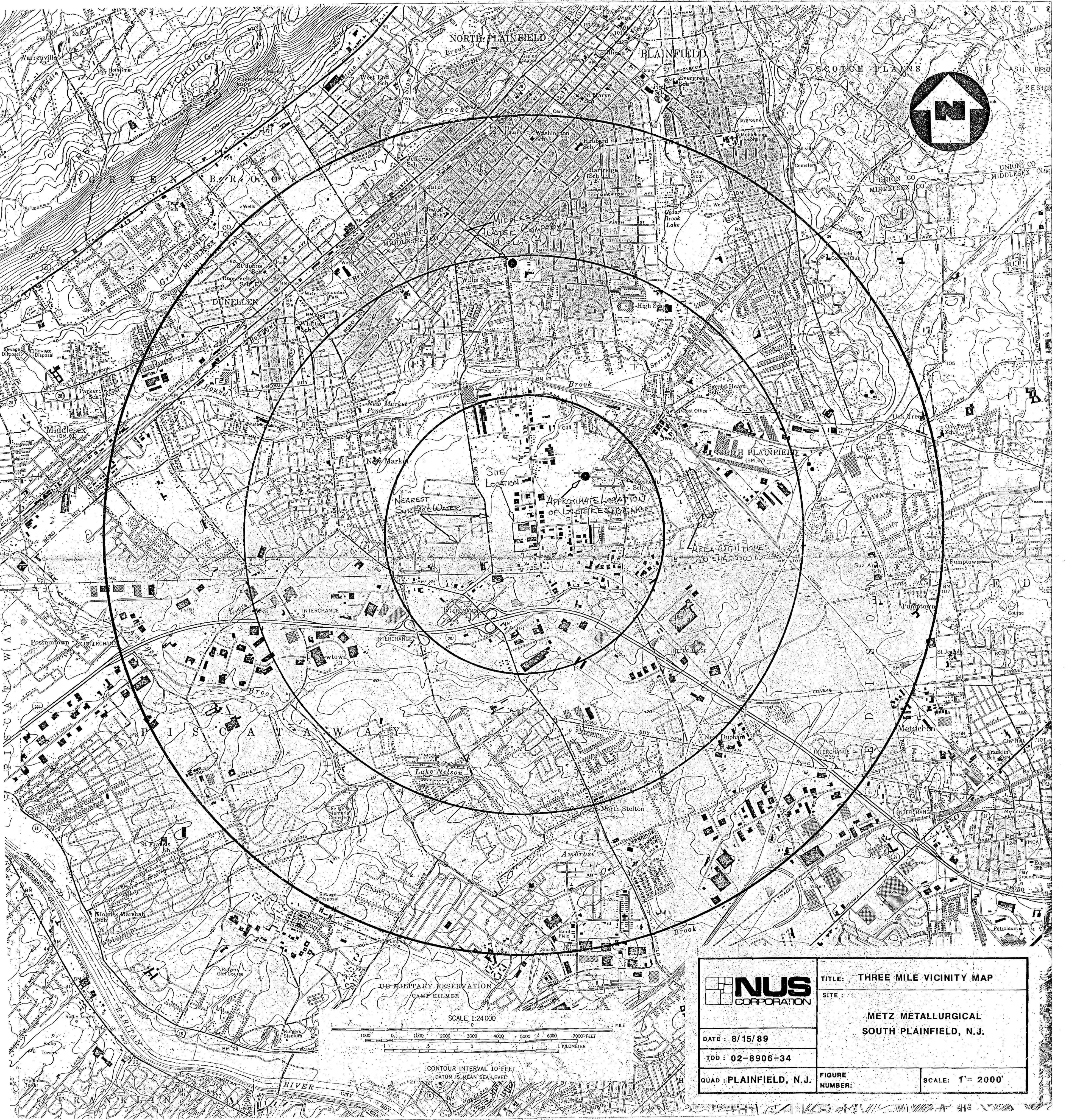
0 2,000 4,000 6,000 8,000 10,000 Ft 0 1 2 3 Km


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	TITLE: THREE MILE VICINITY MAP	
	SITE: METZ METALLURGICAL SOUTH PLAINFIELD, N.J.	
DATE: 8/15/89		
TDD: 02-8906-34		
QUAD: PLAINFIELD, N.J.	FIGURE NUMBER:	SCALE: 1" = 2000'